



# City of Tshwane Built Environment Performance Plan 2020/2021

*7<sup>th</sup> Built Environment Performance Plan of the City of Tshwane*

*Version: Draft 3.00*



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Department of Planning and Economic Development





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# List of Abbreviations

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AGSA: Auditor-General of South Africa	27-22
APR: Annual Performance Report	27-22
AR: Annual Report	27-22
BAC: Bid Adjudication Committee	22-13
BAU: Business as Usual	11-61
BEA: Building Efficiency Accelerator	5-10
BEC: Bid Evaluation Committee	22-12
BEPP: Built Environment Performance Plan	1-1
BEPPSCO: Built Environment Performance Plan Steering Committee	7-15
BEVC: Built Environment Value Chain	5-11
BSC: Budget Steering Committee	10-58
C88: Circular No. 88	25-1
CAP: Climate Action Plan	5-10
CAPS: Capital Planning and Prioritisation System	11-3
CCAM: Conformal-Cubic Atmospheric Model	11-62
CEF: Capital Expenditure Framework	28-10
CID: City Improvement District	25-8
CIF: Capital Investment Framework	27-1
CITP: Comprehensive and Integrated Transport Plan	11-68
CLDP: Catalytic Land Development Preparation	7-3
COGTA: Cooperative Governance Traditional Affairs	6-15
CPM: Capital Prioritisation Model	10-59
CR&R: Climate Change Responsiveness and Resilience	5-9
CRS: Climate Response Strategy	10-56
CRVA: Climate Risk and Vulnerability Assessment	11-64
CSIR: Council for Scientific and Industrial Research	11-67
CSOP: City Strategy and Organisational Performance	27-24
CSP: City Support Programme	6-14
CSU: City Sustainability Unit	5-9
DORA: Division of Revenue Act	2-1
ECE: Expected Capital Expenditure	19-52
EGP: Embedded Generation Policy	10-58
EIM: Macro-Economic Impact Module	14-15
ePMU: Project Management Unit	7-22
EV: Electric Vehicle	10-57
FIPDM: Framework for Infrastructure Delivery and Procurement Management	13-10
GBCSA: Green Building Council of South Africa's	5-10
GBLN: Green Building Leadership Network	5-10
GCMs: Global Circulation Models	10-48
GHGEI: Greenhouse Gas Emissions Inventory	5-10
GIS: Geographic Information System	11-64
GPC: Global Protocol for Community-Scale	10-55
GPG: Gauteng Provincial Government	15-28
GSDF: Gauteng Spatial Development Framework	15-28

ICT: Information Communications Technology	11-67
IGR: inter-governmental	15-28
IGRFA: Inter-Governmental Framework Act	2-3
IPCC: Intergovernmental Panel on Climate Change	10-48
KPAs: Key Performance Areas	11-68
KPI: Key Performance Indicators	27-23
LTFM: Long-term Financial Model	16-3
LTFS: Long-term Financial Strategy	16-3
LUMS: Land Use Management Schema	28-7
MFMA: Municipal Financial and Management Act	6-13
MMCs: Members of the Mayoral Committee	23-14
MSA: Municipal Systems Act	6-13
mSCOA: Municipal Standard Chart of Accounts	13-8
MTREF: Medium-term Revenue and Expenditure Framework	16-40
NATMAP: National Transport Master Plan 2050	2-2
NDP: National Development Plan	6-12
NGP: New Growth Path	2-2
NMT: o Non-motorised transport	10-57
NSDF: National Spatial Development Framework	2-1
NT: National Treasury	27-21
OPM: Organisational Performance Management	27-24
PFMA: Public Finance Management Act	21-3
PMP: Project Management Plan	21-6
PO: Purchase Order	22-11
SANEDI: South African National Energy Development Institute	10-57
SCM: Model Supply Chain Management	21-3
SDBIP: Service Delivery and Budget Implementation Plan	21-5
SDF: Spatial Development Framework	6-15
SDI: Strategy Development and Implementation	27-22
SII: Strategic Investment Initiatives	7-21
SPLUMA: Spatial Planning and Land Use Management Act	6-13
SPP: Sustainable Procurement Policy	10-58
SRA: Special Ratings Area	25-9
SRES: Special Report on Emission Scenarios	10-48
STRIC: City of Tshwane Strategic Investment Committee	7-19
SUD: Strategic Urban Development	7-21
TEB: Town Energy Budget	11-62
TIDs: Technical Indicator Descriptions	27-23
TOD: Transit Oriented Development	10-57
TRT: Tshwane Rapid Transit	10-55
UCM: Urban Climate Model	11-62
UHI: Urban Heat Island	11-61
UNS: Urban Network Structure	7-3
USDG: Urban Settlements Development Grant	27-1
WMP: Wetlands Management Plan	10-56







## Section A: Introduction





# Section A: Introduction

## 1 Status of this Document

This document is the Draft 2020/2021 MTREF Built Environment Performance Plan (BEPP) of the City of Tshwane. The “draft” status means it is currently under review after which it will officially be adopted by the City. Once all comments have been incorporated, a final draft will be prepared for the for approval by the Tshwane Mayoral Committee. Thereafter, the final 2020/2021 MTREF BEPP will be submitted to the Tshwane Council for final endorsement.

## 2 The BEPP Context

### 2.1 Legislative Requirement

The BEPP, as required under the legislation contained in the Division of Revenue Act (DORA 2020), was introduced in the 2011/12 financial year as an eligibility prerequisite for the Urban Settlements Development Grant (USDG). The BEPP subsequently became a key eligibility requirement for a number of Built Environment Grants. The annual and timely submission of a credible BEPP document by Tshwane is therefore important, in terms of the City’s ability to fund its annual capital requirements.

The content of this BEPP document is based on “BEPP Guidance Notes” of 2018/19; 2019/20 and 2020/21 that were provided by National Treasury. The guidelines provided by National Treasury outline the BEPP as a response to challenges of misalignment in planning practices and weak linkages between monitoring, planning and budgeting frameworks. The BEPP forms a part of the municipal planning system and bridges the gap between planning intention and implementation programmes together with corresponding resource allocation. In addition to the above, the BEPP provides a framework within which a clear, outcomes led approach remains consistent with higher order plans and its associated governing legislation.

### 2.2 Relation to Other Statutory Plans and Processes

The BEPP does not override the municipal function of spatial planning and land use management, in terms of SPLUMA, but supports metropolitan municipalities in creating an enabling policy and regulatory environment, in order to achieve more compact cities. The planning alignment and reform advocated by the BEPP Guidelines (and its inherent approach, tools and instruments) are complemented by national regulatory, fiscal, monitoring and reporting reforms.

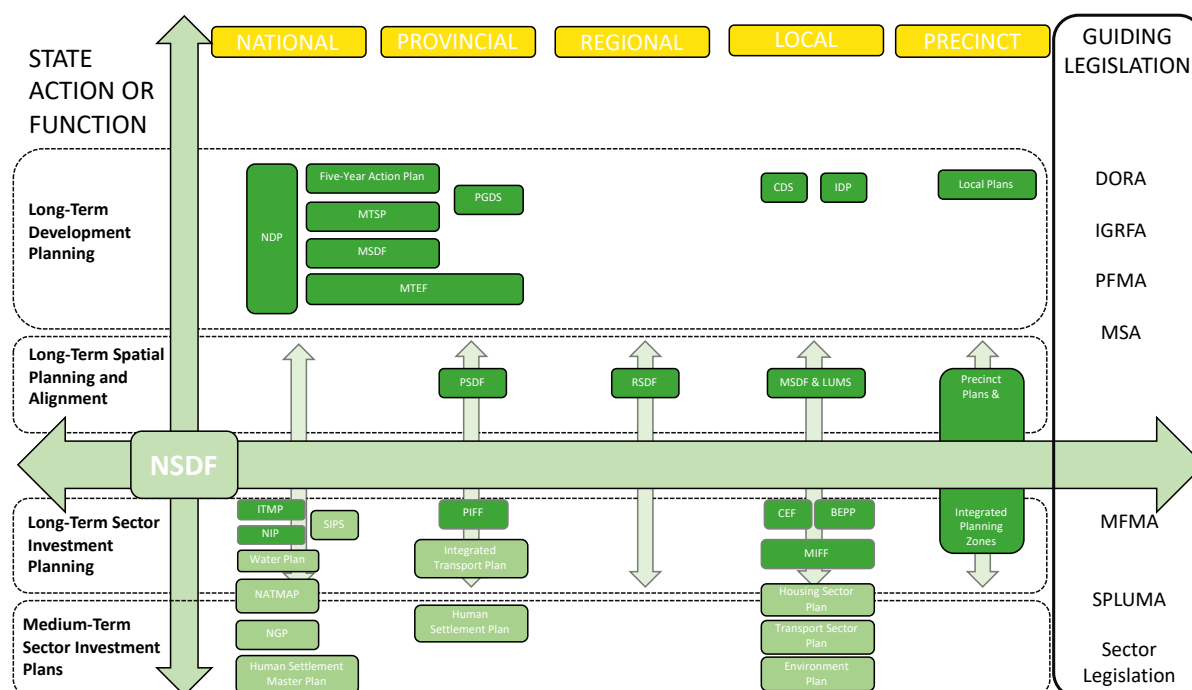
The role of the BEPP is to promote an outcomes-led planning approach with regards to a multitude of spatial planning documents within the City, in order to ensure that implementation is guided by strategic, spatial, financial and social logic. The BEPP serves not only as planning and performance evaluation mechanism, but also as a rationale towards capital investment planning that provides business intelligence, data validation, project synchronisation and prioritisation.

### 2.3 Hierarchy of Plans

In terms of government policy, Chapter 8 of the NDP calls for the preparation of a “national spatial development framework” (Draft NSDF). Section 5(3)(a) of SPLUMA provides for, and Sections 13(1) and (2) of the Act mandate the Minister to, “... after consultation with other organs of state and with

the public, compile and publish a national spatial development framework” and review it at least once every five years.

Figure 1 Hierarchy of Strategic and Sectoral Plans



As shown in Figure 1, the Draft NSDF must, within the broader ‘family’ of strategic and sector plans of government:

- Target and direct all infrastructure investment and development spending decisions by national sector departments and State- Owned Entities (SOEs);
- Guide and align plan preparation, budgeting and implementation across spheres and between sectors of government; and
- Frame and coordinate provincial, regional and municipal spatial development frameworks.

The Draft NSDF informs, guides and co-ordinates spatial development across all spheres of government. The content of the Draft NSDF is supported by the National Development Plan (NDP) and by sector-based plans/frameworks/strategies, which include, but are not limited to the New Growth Path (NGP), National Transport Master Plan 2050 (NATMAP); Strategic Integrated Projects and the Human Settlements Master Plan.

The intention is that municipalities should use this guideline to assist in the process of accountable and responsive spatial allocation of funding. The BEPP responds to National Government’s Specific Spatial Investment Initiatives as provided by the Draft NSDF.

Relevant legislation, also invoke the following:

- Improved processes for municipal planning and budgeting allow for more informed decisions and are fundamental to sustainable and efficient service provision. (MFMA, 2011)

- A municipal spatial investment framework must determine a capital expenditure framework for the municipality's development programmes, depicted spatially (Act No. 16 of 2013: Spatial Planning and Land use management Act (SPLUMA), 2013)
- A credible BEPP must clearly find expression in the Metro's budget. Strategy-led budgeting is essential. The MTREF's budget's prioritization of resources in space according to the spatial targeting areas should be measured year-on-year. Guidance Note: Framework for the formulation of BEPPs, National Treasury's Cities Support Programme, 2017/18 – 2019/20)

## 2.4 Intergovernmental Planning

The District Development Model is aimed at placing focus on District or Metropolitan spaces as appropriate scale and arena for intergovernmental planning and co-ordination. The focus is on 44 Districts and 8 Metros as developmental spaces (IGR Impact Zones) that will be strategic alignment platforms for all three spheres of government. This is in order to produce a Spatially Integrated Single Government Plan (New District Coordination Model to Improve the Coherence and Impact of Government Service Delivery and Development; August 2019) for each of these spaces that guides and directs all strategic investment spending and project delivery and forms the basis for accountability.

This approach reinforces an outcomes-based IGR system where there is a systematic IGR programme and process associated with the formulation and implementation of a single government plan. It changes from a process of aligning separate plans towards a single plan bearing testimony of regulated cooperative governance. The purpose of enhancing cooperative governance through a new district coordination model is to improve the coherence and spatial targeting impact of all three spheres of government working together in unison.

The main objectives of the District Model are listed below:

- Managing rural/urban migration, as well as sustainable growth and development;
- Determining and/or supporting local economic drivers;
- Determining and managing spatial form, land release and land development;
- Determining infrastructure investment requirements and ensuring long-term infrastructure adequacy to support integrated human settlements, economic activity and provision of basic services, community and social services;
- Institutionalising long term planning whilst addressing 'burning' short term issues

The Inter-Governmental Framework Act (IGRFA) sets out the general principles and objects of intergovernmental relations. The focus is primarily on the following outcomes:

- Coherent government;
- Effective provision of services;
- Monitoring implementation of policy legislation; and
- Realisation of national priorities

The City's BEPP should include the pipeline of all projects within its boundaries irrespective of which level of government is implementing it, which in turn adheres to the requirements as set out by the District Development Model Concept Note. The BEPP is therefore an important instrument of cooperative governance, as it enables more effective, strategic coordination and planning between spheres, entities and departments of government. Importantly, this is not an end in itself but a precondition for spatially guiding and attracting a positive response from private sector investors and unlocking contributions from households.

## 2.5 BEPP Source Documents

Table 1 below indicates the guidance documents used to compile the 2020/21 BEPP from an International level down to local government level. Documents include various national and local development frameworks, guidelines, strategic agendas and spatial settings together with key legislation which governs these documents.

Table 1 List of Reference Documents

Government Level	Reference Documents
International	United Nations Sustainable Development Goals (UN SDG's, 2016)
National	<ul style="list-style-type: none"> <li>National Spatial Development Perspective (NSDP, 2009)</li> <li>National Integrated Urban Development Framework (NIUDF, 2016)</li> <li>Spatial Planning and Land Use Management Act (SPLUMA 2013)</li> <li>National Climate Change Response White Paper (NCCRWP, 2012)</li> <li>Framework for Strategic Plans and Annual Performance Plans (2010)</li> <li>Government Gazette: Intergovernmental Relations Framework Act (vol.482, 2005)</li> <li>Draft National Spatial Development Framework (2018)</li> </ul>
Provincial	<ul style="list-style-type: none"> <li>Gauteng Spatial Development Framework (GSDF) (2011)</li> <li>Gauteng Spatial Development Framework (GSDF) (2015)</li> <li>Gauteng Provincial Government Multi-Pillar Programme of Radical Transformation</li> <li>Gauteng Climate Change Response Strategy (2011)</li> </ul>
Municipal	<ul style="list-style-type: none"> <li>Built Environment Performance Plans Guidance Note 2018/19 MTREF</li> <li>Built Environment Performance Plans Guidance Note 2019/20 MTREF</li> <li>Draft Built Environment Performance Plans Guidance Note 2020/21 MTREF</li> <li>Tshwane Integrated Development Plan (IDP) 2017/21 (Draft, 2018/19)</li> <li>Tshwane Service Delivery Budget Implementation Plan (SDBIP)</li> <li>Metropolitan Spatial Development Framework (SDF, 2012)</li> <li>Planning Policy for Tshwane Rapid Transit (TRT)</li> <li>Integrated Rapid Public Transport Network (IRPTN)</li> <li>Land Use – Transport Integration Plan</li> <li>City of Tshwane (CoT) Spatial Atlas (Demographics)</li> <li>CSIR Urban Sim Results (CSIR, 2017)</li> <li>City of Tshwane Capital Expenditure Framework</li> <li>Sustainable Human Settlements Plan, 2014</li> <li>City Improvement District By-law (Draft, 2018)</li> <li>Tshwane Automotive City Development Framework (Draft, 2016)</li> <li>Tshwane Inner City and Regeneration Strategy (Abridged version, 2006)</li> <li>City of Tshwane Climate Response Strategy (Draft, 2018)</li> <li>Framework for a Green Economy Transition</li> </ul>

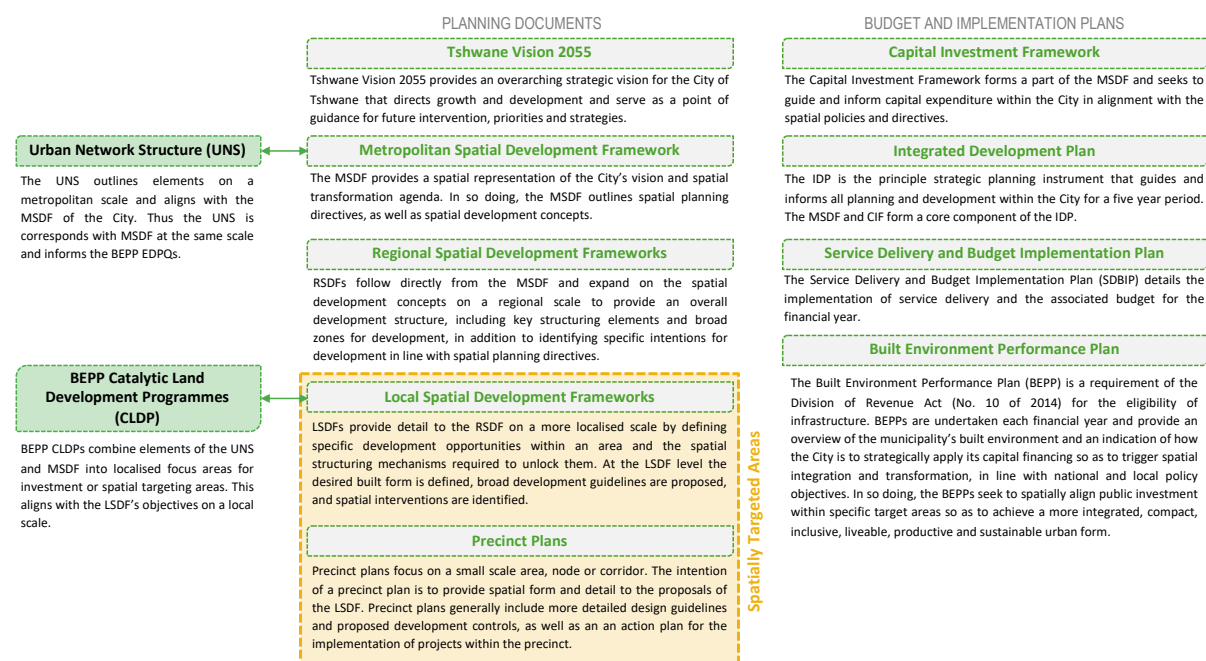
Government Level	Reference Documents
	<ul style="list-style-type: none"> <li>City of Tshwane Climate Risk &amp; Vulnerability Assessment (2015)</li> <li>City of Tshwane State of Energy Report (2017)</li> <li>Sustainable Financing Strategy for Green Economy Transition (2015)</li> <li>Sustainable Procurement Strategy (2017)</li> <li>Mamelodi Development Intervention Portfolios (Chapter 4: Principles and Guidelines 2015)</li> <li>Re-alignment and Re-engineering of the City of Tshwane Strategic Investment Committee (STRIC) Processes and Structures (March 2019)</li> <li>Tshwane Strategic Investment Approach: Definitions, Evaluation Criteria and Implementation Method (July 2019)</li> <li>Establishment of Grant Management Committee (January 2019)</li> <li>New District-Metro Coordination Model Concept Note_Draft (August 2019)</li> </ul>

## 2.6 BEPP Alignment to Municipal Processes

The municipal process is a cyclical process, where outputs of the one year's planning and budgeting cycle informs the following year's planning and budgeting cycle. On a planning scale, Urban Network Structure (UNS) outlines elements on a metropolitan scale and thus, corresponds with the Metropolitan Spatial Development Framework (MSDF) of the City, as well as strategic focused documents such as the Tshwane Vision (2055) and Regional Spatial Development Frameworks (RSDF). The outputs contained result in the BEPP Catalytic Land Development Programmes (CLDP), which looks at focus areas for investment or spatial targeting areas. Spatially Targeted Areas are informed by Local Spatial Development Frameworks (LSDF), as well as Precinct Plans in order to provide spatial form and details to the proposal of the LSDF.

Given this interaction (planning, budgeting, implementation and back to planning again) it is clear that the BEPP informs (1) the Integrated Development Plan; (2) the Capital Investment Framework (CIF) and the (3) Service Delivery and Budget Implementation Plan. The outputs contained within these reports is on the progress and performance for that financial year, followed by a strategic direction for the following financial year. Figure 2 outlines the planning documents together with the budget and implementation plans within the City which govern the process described above and is reported on annual through the BEPP.

Figure 2 Alignment between the BEPP and Municipal Processes



The BEPP guidelines prescribe that Urban Network Structure (UNS) be incorporated as an important input source. The development of this BEPP therefore incorporated the Urban Structuring Elements that stem from the Tshwane UNS. This included Integration Zones, Urban Cores and Underserved Townships (that were identified as part of former planning processes that involved inter alia, density and land use management appraisals).

The City has identified Strategic Spatial Targeting Areas in which Catalytic Land Development Programmes are driven. These Priority Investment areas are discussed in Section B and C of this BEPP document.

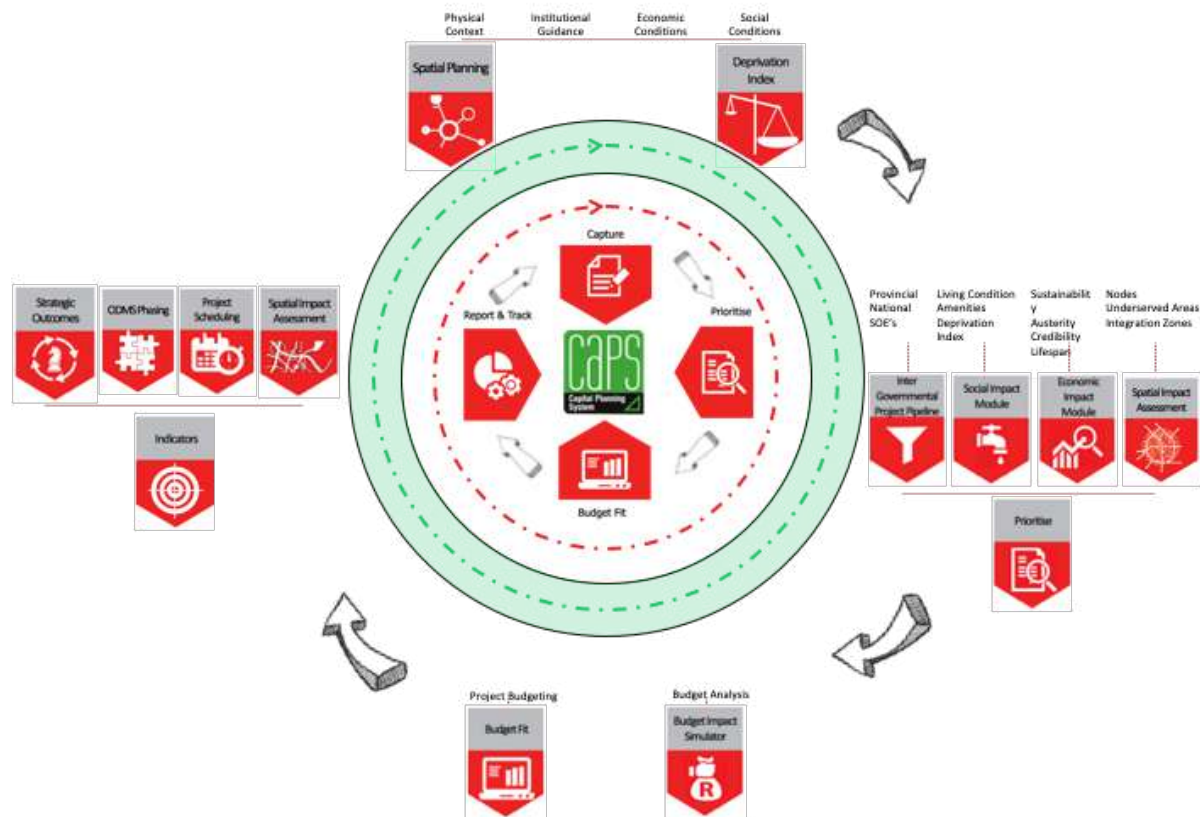
### 3 City of Tshwane Strategic Planning and Implementation Framework Process

The City's Capital Planning and Prioritisation Process (CaPS) is a planning and decision support tool that ensures that capital projects within the City are evaluated according to quantitative, qualitative and spatial transformation criteria as part of the formulation of the annual developmental (capital) budget.

Figure 3 shows the various elements involved in the City's current Planning and Prioritisation Process (CaPS) process:



Figure 3 Capital Planning System (CP3 Diagram)



In order to integrate with the City of Tshwane's Strategic Planning and Implementation Framework Process, the CaPS process is utilised to enable Tshwane to make use of a centralised decision support system. Investment needs are recorded per department, typically derived from sources such as the Integrated Development Plan (IDP) or a Capital Investment Plan (CIP).

Projects are evaluated using various criteria, taking into consideration the quantitative, qualitative and/ or spatial priorities, in line with the City's strategic, spatial, economic, financial and technical objectives. This enables an acknowledgement of the capital expenditure of other public entities, by having sight of projects on the CaPS Inter-governmental (IGR) project pipeline platform.

The CaPS process evaluates the social and economic impact of capital expenditure, based on standardised economic and social indicators, as well as relating Capex with various levels of government's strategic outcomes as per various policy documents, together with the IDP office. CaPs also relates Capex with strategic outcomes that are specifically aligned to CR&R actions and goals, together with the UN's Sustainable Development Goals. A dynamic model taking into account all this data, assists the city to model and prioritise the multitude of capital needs. The process takes into account political strategies, objectives, mission statements, vision statements as well as other strategic contents and evaluates a varied range of project types measuring each project's global alignment with organisational priorities and also the project's specific, contextual technical merits.

The CaPS process runs a budget analysis in order to test various Capex scenarios to develop a balanced, defensible, responsive and equitable budget allocation, based on standardised indicators. A budget fit process is facilitated together with Tshwane's Finance Department in order to determine the best MTREF Capex budget for the City annually. CaPS furthermore enables the City of Tshwane to evaluate and report on a myriad of elements that are related to the Capital project book, at any point in time,

such as the CIDMS phasing, project scheduling and mSCOA. It therefore is a fundamental input generating tool for the development of a robust and defensible BEPP for the city.

## 4 Diagnostic Assessment

Spatial Development Frameworks, regardless of their granularity, often focus on an analysis of the area at hand. Often these documents get overlooked, due to the fact that the elements analysed, and the manner in which it is presented leads to analysis paralysis. Overly complicated documents are the result and so often, losing the ability to convey relevance of the analysis done.

With respect to the BEPP since the inception of the BEPP in the City, several analyses done within the City found its way into the BEPP. This is useful for contextualisation and understanding the dynamics within the City. However, the spatial targeting component of the BEPP, is more geared towards the concept alignment, priority identification methodology and result, Integration Zone definition and the associated housing and transport alignment.

The variety of assessment done in the City correlates with the different needs that the City needs to address. This includes three broad categories:

- Population Distribution and Human Settlements – where people are;
- Transport and Movement Patterns – where people move, and;
- Socio-Economic analysis – who the people are that are living and moving in the city.

The diagnostic assessment in terms of Population Distribution and Human Settlements are further broken down into sub-categories that aim to determine where people are, where they will be and how the city is responding to these trends.

The diagnostic assessment in terms of Transport and Movement Patterns are further broken down into sub-categories that aim to determine what needs exist regarding transport and what means are available to transport with.

The diagnostic assessment in terms of Socio-Economic characteristics are further broken down into sub categories that aim to determine what the population characteristics are, what the level of service are regarding basic social facilities and engineering services, and most importantly, what the climate change impact is in terms of the population within the City.

The attributes per area in the diagnostic assessment, informs the identification process of spatial structuring elements and of priority areas. Refer to Addendum 1 for a detailed summary of the diagnostic report.

## 5 Climate Responsiveness and Resilience within the BEPP Framework

During the 2019/20 BEPP reporting period, climate change mainstreaming was introduced as a requirement into the municipal planning, budgeting and reporting processes. In order to comply with the requirements, as set by the “Mainstreaming Climate Responsiveness into City Plans, Budgets and Grant Conditions Report – Phase 2 (CSP, August 2018) document, reference will be to the current climate change assessments which have been undertaken by the City.

The ability of municipalities to respond to climate change impacts have direct financial implications, thus influencing a City's financial sustainability and programme implementation. To achieve successful consideration of Climate Change Responsiveness and Resilience (CR&R) as part of the BEPP reporting process, the 2019/20 Guideline sets out a multi-year phased approach as displayed in Table 2 below.

Table 2 Multi-year approach to CR&R mainstreaming as a part of the BEPP

Requirements for Year 1 (2019/20)	Requirements for Year 2 (2020/21)	Requirements for Year 3 (2021/22)
Clear Establishment of Climate Risk and Vulnerability Assessments.	Provision of relative weightings to CR&R dimensions.	Resultant projects stemming from CR&R integration with Spatial Targeted Areas.
Incorporating context specific climate risks and impacts into the relevant aspects of the BEVC.	Identification of Climate Risk Zones.	Demonstration of organisation changes incorporating the CR&R toolkit to the project pipeline.
Incorporating climate change expertise into structures responsible for future planning decisions.	Application of Climate Risk Zones to Spatial Targeted Areas.	Evidence-based reporting of CR&R mainstreaming.
	Design and implementation of CR&R focussed infrastructure projects.	
	Monitoring and reporting of CR&R indicators.	
	Institutional arrangements should be in place.	

Building on the requirements for the 2019/20 and 2020/21 reporting period, the 2020/21 BEPP document includes a base assessment of the City's climate change profile and risks, institutional intervention of climate change expertise, climate risk and vulnerability assessments in relation to spatially targeted areas and CR&R mainstreaming as part of the infrastructure investment planning process.

## 5.1 Climate Change Profile

The City's institutional commitment to address climate change manifested in the establishment of a specialist unit in the Office of the Executive Mayor, known as the City Sustainability Unit (CSU). The CSU mandate includes overseeing the City's transition towards a low carbon emission, resource efficient and climate resilient city. A detailed description of the CSU's institutional framework together with the level of departmental engagement has been included in Addendum 4.

### 5.1.1 Action and Strategic Documentation

As an initial point of action, the CSU worked together with administrative departments to mainstream climate action into the preparation of policies, plans and programmes. Policy measures have included

the development of the Green Economy Framework to respond to resource scarcity, which has subsequently led to the establishment of the following:

- the Green Economy;
- the Green Building By-law, which aims to support the uptake of green building principles;
- the Sustainable Financing Strategy, which aims to finance sustainable service delivery;
- the Sustainable Procurement Strategy, which aims to seek greener alternatives to existing products and services procured by the City.

In addition to the above, the CSU has released the Climate Response Strategy which forms the foundation of the Climate Action Plan (CAP), a plan currently under development with support of the C40 Cities Climate Leadership Group. The City became a member of C40 in 2014, a move that has contributed tremendously in augmenting the vision of a sustainable capital city.

### **5.1.2 City's Climate Change Programmes**

CSU management measures are premised on two pivotal studies which include the Greenhouse Gas Emissions Inventory (GHGEI) and The Climate Risk and Vulnerability Assessment. These studies have guided the development of the Mitigation and Adaptation Programmes.

#### **5.1.2.1 Climate Action**

- **Mitigation**

The annual revised version of the Greenhouse Gas Emissions Inventory (GHGEI) indicates that the City is emitting 21 million tonnes of carbon dioxide equivalent per annum. Energy, transport and waste sectors have been identified as the largest contributors towards greenhouse gas emissions. The Mitigation Programme thus focuses on how to reduce and avoid emissions from these three sectors.

In addition to the above, the Green Buildings Programme forms part of the mitigation focus of the CSU. The Green Buildings Programme focuses primarily on new builds and addresses all forms of structures. The City is a member of both the Green Building Council of South Africa's (GBCSA) Green Building Leadership Network (GBLN) and the World Resources Institute's Building Efficiency Accelerator (BEA) Programme.

- **Adaptation**

The Climate Risk and Vulnerability Assessment indicates that average temperatures have increased by 1.8°C since 1960 and that precipitation levels have decreased. However, when it does rain, the City experiences extreme downpours which creates high rates of runoff and limited recharge which could lead to instances of flash floods. The management of increasing temperatures and related impacts, together with securing future water resources, are of extreme importance to the resilience of the City and forms the central focus for the Adaptation Programme.

#### **5.1.2.2 Sustainability Support Mechanisms: Sustainable Financing, Resource Mobilisation & Sustainability Profiling**

In addition to the above-mentioned programmes, the CSU has adopted the Sustainability Support Mechanisms programme together with Demonstration Projects & Sustainable Service Delivery. This programme is wide-ranging and offers support measures to enhance the impact of mitigation and adaptation programmes. This includes sustainability financing and resource mobilisation,

sustainability profiling, research and documentation, demonstration projects and outreach programmes. Methods of engagement aimed at achieving the above-mentioned programmes include the following:

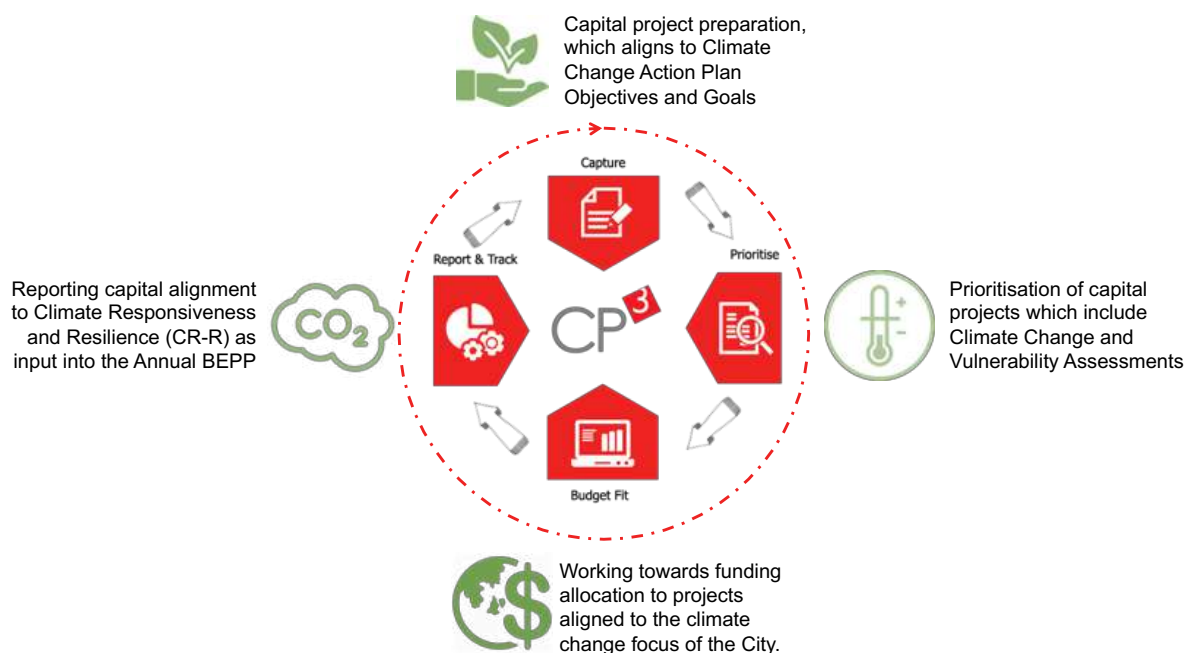
- Demonstration projects,
- Research,
- Advisory services,
- Outreach campaigns.

For a detailed assessment of the mitigation and adaptation focus of the City refer to Chapter 10. The institutional framework for the CSU together with departmental engagement has been included in Addendum 4.

### 5.1.3 CR&R Mainstreaming into the Annual Budgeting Process

In anticipation of the CR&R mainstreaming objective, the City has opted for the inclusion of climate change focus areas into the annual budgeting process. The initial introduction of the CR&R commenced during the 2019/20 budgeting cycle and was successfully implemented as part of the capture, prioritization and reporting processes facilitated by the CaPS system. Figure 4 below provides some of the objectives for CR&R mainstreaming incorporated into the annual budgeting process (through the use of CaPS), which was achieved through collaboration between the City Sustainability Unit, the C40 support programme and Economic Development and Spatial Planning. The manner in which CR&R mainstreaming was incorporated into the annual budgeting process allows for an integrated approach to municipal planning, budgeting and reporting. It is subsequently reported in this BEPP document as integrated elements of the Built Environment Value Chain (BEVC) process.

Figure 4 CR&R Mainstreaming and the Annual Budgeting Process



## 6 City Transformation through Theory of Change and the Built Environment Value Chain

BEVC is based on a sequence of events which represents a logical planning and implementation framework for built environment projects and initiatives. The concept of the BEVC was designed to guide the BEPP as a planning instrument which reforms current planning processes together with a reporting mechanism to report on progress made. The reporting mechanism will ensure that integrated spatial transformation outcomes are achieved.

During the 2019/20 reporting period, the City's BEPP document was structured according to the sequential components of the BEVC with particular focus on setting the context of the City for each component. The City has however realised the importance of initiating the BEVC with a clear understanding and adoption of outcomes (Outcomes-Led planning), which furthermore requires the process of adopting theory of change. With this in mind, the City has restructured its 2020/21 BEPP report to identify a theory of change followed by actioning this through the components of the BEVC.

### 6.1 Theory of Change

The theory of change concept essentially encapsulates the identification of a desired end-state, desired outcomes, or changed state, and a detailed assessment and strategy of how this can be achieved through the use of an outcome framework. An outcome framework outlines a desired set of long-term goals which is then mapped backwards to identify strategies and measurable actions to achieving these long-term goals. The process of an outcome framework also requires a reporting framework to assess progress made on achieving each goal and to understand the impact of implementing strategies and actions.

The City has opted to initiate the theory of change through identifying three principles to guide this process:

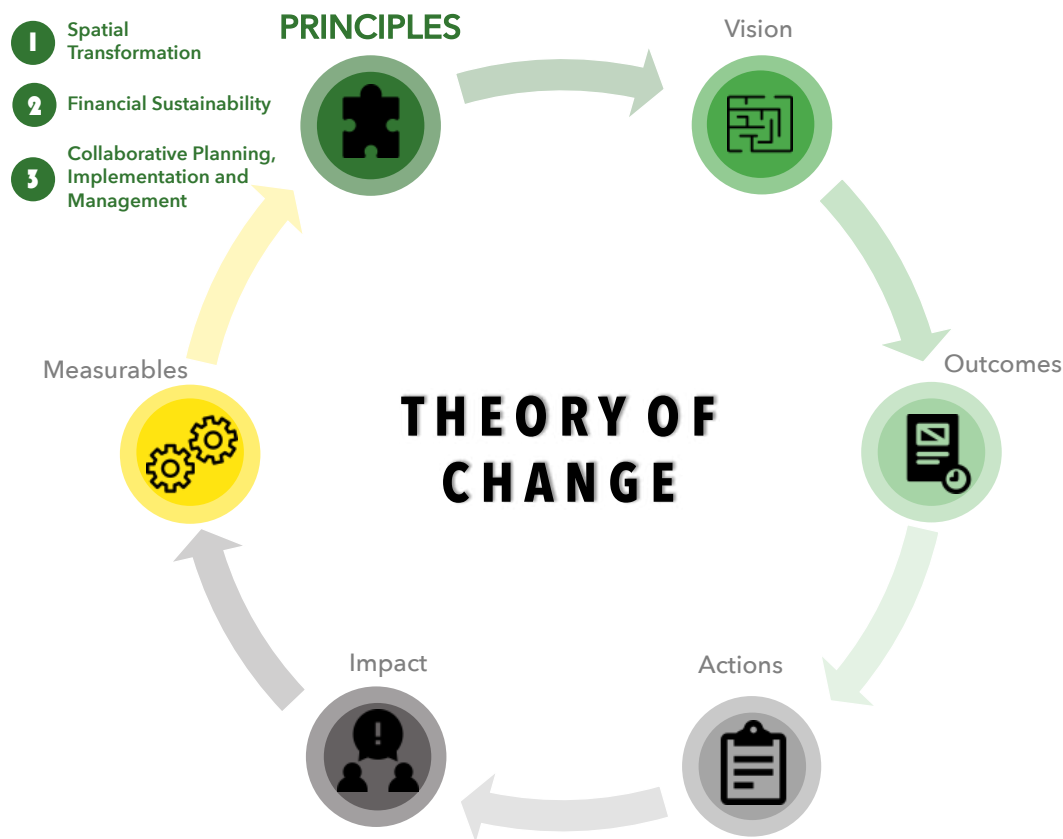
- Spatial Transformation;
- Financial Sustainability; and
- Collaborative Planning, Implementation and Management.

These principles were identified in line with the current planning reform initiatives in Government and includes the strategic vision outlined in the National Development Plan (NDP) together with the strategic and spatial vision for the City.

It is important to note that each of these principles should not be viewed in isolation, but rather as interchangeable and integrated mechanisms to achieve a City which is integrated in terms of its spatial vision through financial sustainability and good governance practices and vice versa. Figure 5 below outlines the City's approach to theory of change through the application of an outcome framework which aligns to the three principles mentioned above.



Figure 5 Outcomes Framework



The structure of the outcome framework starts with each of the three principles described above, followed by the vision (long-term goal) pertaining to each principle, outcomes, actions, impact and measurables:

- The 1st component outlines the vision that the City has identified (either strategic and/or spatial transformative vision) and aligns to statutory requirements as set out in the Municipal Financial and Management Act (MFMA 56 of 2003), Municipal Systems Act (MSA 32 of 2000), Intergovernmental Relations Framework Act (13 of 2005) and the Spatial Planning and Land Use Management Act (SPLUMA 2013).
- The 2nd component outlines the desired outcome for each vision element or component, this includes the strategies, methods or mechanisms through which the City will achieve the vision set out for each principle.
- The 3rd component outlines the actions that the city will have to take in order to achieve each outcome and essentially realise each vision.
- The 4th component describes the desired impact of each action and outlines the “on the ground” approach to achieving the outcomes identified as part of the 3rd component.
- The 5th component encompasses the outcome framework structure, which allows for the measuring of the impacts and actions identified in the 3rd and 4th component in order to track and monitor progress against achieving each vision. It is important to ensure that the strategy and resulting actions are specified in such a way as to be practically implementable. “SMART” is a useful acronym which provide some guidance in the setting

of objectives or actions. SMART objectives or actions are Specific, Measurable, Achievable, Realistic, and Timely. By defining objectives or actions in this way, one ensures that the objectives, actions and impacts are measurable within an implementation framework.

## 6.2 Structure of the document

The BEVC (refer to Figure 6) and the Theory of Change have been incorporated into the BEPP structure as guiding principles. Consequently the 2020/21 BEPP report has been structured to introduce each section with content aimed at contextualising the Theory of Change and principle most applicable to each section, together with indicating the actions and impacts associated with each particular principle. The body of each section contains the content as required in the BEPP Guidelines and supplementary guidelines for 2018/19, 2019/20 and 2020/21, with key focus aimed at addressing comments received from the City Support Programme (CSP) review during the 2019/20 and 2020/21 reporting period. Each section concludes with institutional arrangements, which highlights processes or governance reforms put in place to address certain gaps identified within each section.

Figure 6 Built Environment Value Chain

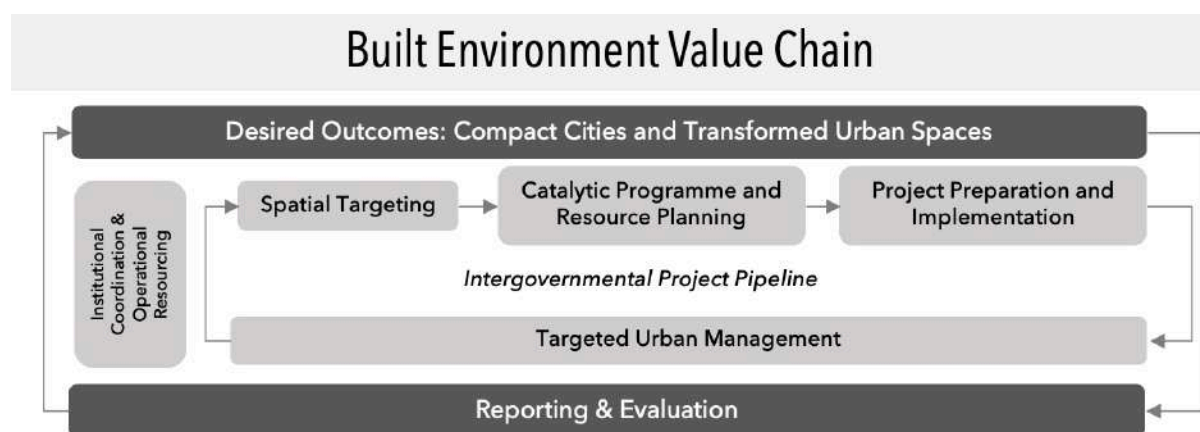
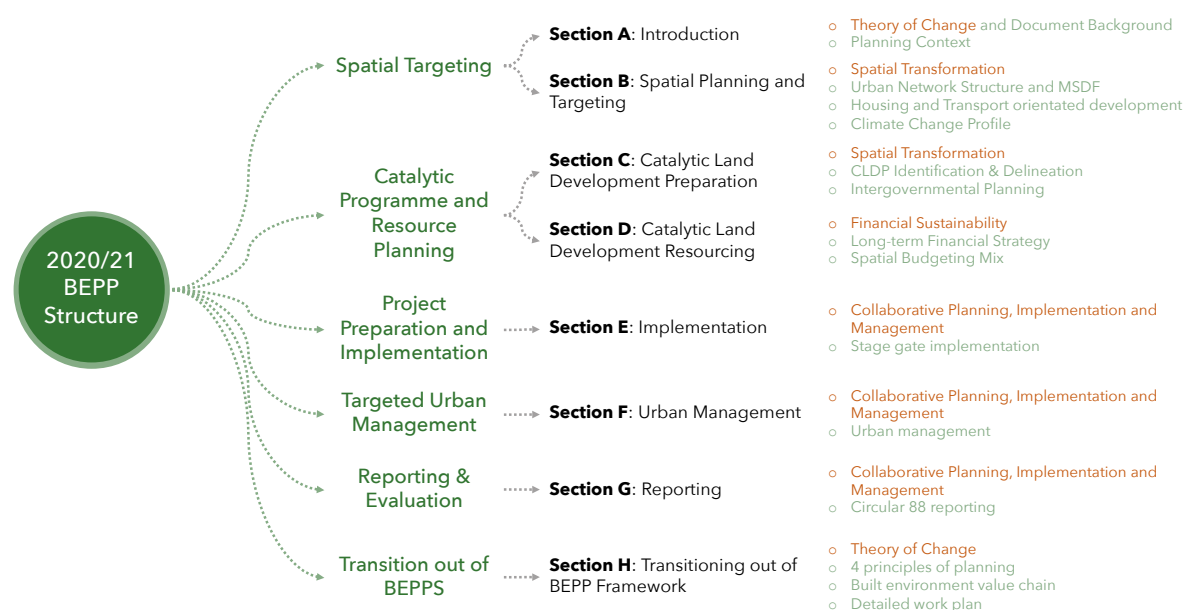


Figure 7 Structure of the Document



The last section of the BEPP, Section H, has been included in the 2020/21 BEPP to outline the City's approach to transitioning out of the BEPP. The content of the section has been structured to outline a framework in which the theory of change can be achieved, through integrating the principles and actions with the four elements of planning and the BEVC process. The four elements of planning originated as a reference to best practice recognised at the Planning Reforms Seminar in June 2018. The Planning Reform Seminar, which took place from 13-14 June 2018, intended to combine principles of planning reforms founded on the outcomes of metropolitan BEPPs and contributions made to spatial transformation. These planning reforms have been documented as five input papers to the seminar namely:

- Outcomes Led Planning;
- Strategy Led Budgeting;
- Spatially Targeted Public Infrastructure Investment;
- Aligning Planning and Capital Budgeting Tool; and
- Fiscal Impacts Tool.

During the Planning Reforms Seminar one of the key recommendations made was to use the BEPP to strengthen the range of plans and especially the SDF and IDP through the application of the above-mentioned input papers. At the same time, COGTA announced that Review of the IDP Guidelines.

The four elements of planning have been identified to guide the criteria for assessment of metropolitan plans suggested in the Rational for Transitioning out of Planning Reforms and BEPPS (CSP 2020). This section concludes with the detailed work plan implemented within the City during the 2020/21 reporting period and provides the primary anchor point for achieving Theory of Change through existing legislated processes and requirements.

## **7 Institutional Consolidation**

### **7.1 BEPP Steering Committee**

The City of Tshwane has established a Built Environment Performance Plan Steering Committee (BEPPSCO)<sup>1</sup> on the 14<sup>th</sup> of December 2017. The establishment of BEPPSCO focusses on achieving the following functions:

- Facilitate collaboration on the annual development and revisions of the BEPP;
- Create a forum that can inform the City on inter-governmental discussions;
- Provide technical guidance in terms of the strategic direction of the City in line with its theory of change (and in the process, create institutional memory);
- Ensure the alignment of a variety of Municipal development planning to the BEPP;

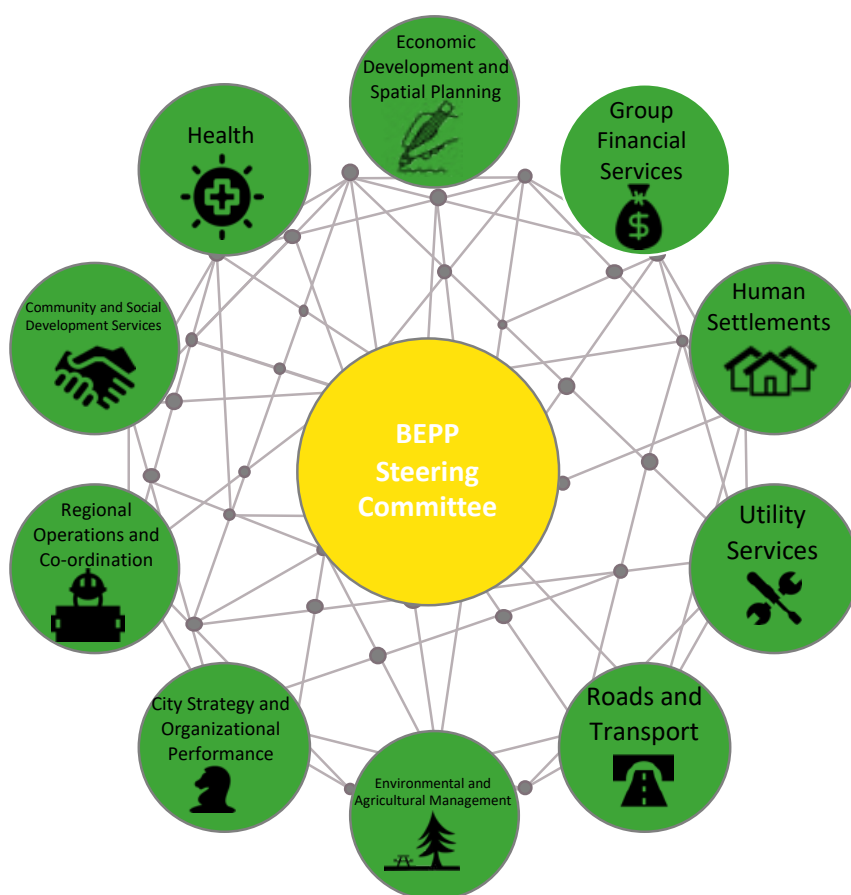
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<sup>1</sup> As per the memorandum on 14 December 2017.

- Serve as the City's integrated strategic planning forum spanning the longer- and medium-term planning horizons; and
- Maintain a continuity on the development and maintenance of the BEPP, and the processes required as key input to the BEPP. This includes the institutional planning reforms promoted through the BEPP process.

The Tshwane BEPP has been managed by the Economic and Spatial Development Department since 2014, which also includes the capturing of capital projects for the municipal MTREF via CaPS. This is achieved in collaboration with the City's Finance Department (Budget Office) and Strategies and Performance Management Department. The strong institutionalised processes of the BEPP aim to achieve a BEPP that is credible and owned by all strategic departments. In order for the City to achieve this goal in a sustainable manner, BEPPSCO was established with representation from the departments as indicated in Figure 8.

Figure 8 BEPPSCO Members



**The establishment of a strong and institutionalised process in order to achieve a BEPP that is credible and owned by all strategic departments**

Since the establishment of BEPPSCO, a number of workshops have taken place that were focussed on a variety of factors in relation to the BEPP. The table below outlines these workshops, ranging from 2019/20 – 2020/21, together with the main objectives and outcomes from each workshop.

Table 3 BEPPSCO Workshops

Date	Agenda	Outcomes
06-Mar-18	Background view on the annual BEPP process.	Circulation of the BEPP Guidelines to departments.
	Establishing the context BEPPSCO and the role of departments.	Circulation of the 2018/19 BEPP document.
		Departments to comment on the 2018/19 BEPP document submitted.
		BEPPSCO to be held at least once per quarter.
	Background view on the purpose of CaPS and how the CaPS Process links with the annual BEPP process.	
	An overview of the CaPS process, IDP and annual budget cycle.	
	A view into the 2018/19 BEPP submission.	
14-Sep-18	Capital project planning and capturing for the 2019/20 MTREF.	Representatives of Departments to communicate the CaPS process of project planning and capturing based on memorandum.
	An overview of new CaPS functionality and changes incorporated.	
	CaPS training schedule.	
	Feedback from the 2018/19 BEPP submission and areas of improvement required.	One-on-One sessions to take place on the BEPP requirements for 2019/20
	Implementation of CR&R mainstreaming into the 2019/20 BEPP submission.	
11-Dec-18	Feedback from the Capital project planning and capturing process.	Project completion status to be shared with departments in order to allow for project clean-up and the capturing of outstanding information on CaPS.
		Representatives from the City Sustainability Unit to provide assistance and training in terms of the CR&R focus.
	An overview of the prioritisation and budget fit process which followed after capturing.	
14-Sep-19	Capital Planning System Feedback from Departments	Various departments provided feedback and comment on the annual budgeting process using the capital planning system. Comments were noted for improvement to the process for the next budgeting cycle.
	2019/20 National Treasury BEPP Evaluation Feedback.	The issue regarding housing and transport alignment planning was raised to be addressed in a separate meeting between these 2 departments. To be facilitated by the CaPS TTT.
	Departmental Review of the 2019/20 BEPP	Guidelines on the review of the 2019/20 BEPP document were given, with specific reference

Date	Agenda	Outcomes
	Departmental Inputs Required for the 2019/20 BEPP	to the comments received from CSP to be addressed.
	2020/21 Capital Planning Cycle and Process	
22-Jan-20	Long Term Financial Strategy and Model	The city's Finance Department together with INCA provided background to the LTFS and the results of the LTFM.
	2020/21 Capital Budgeting process feedback and results.	The city's Finance Department provided feedback on the adjustment budget and challenges during the process, to be addressed during the next budgeting cycle.
	2020/21 Capital budgeting process going forward	The budget scenario results were analysed and presented to departments based on the outputs of the LTFM.
	Status of the 2020/21 BEPP document and way forward.	Departments provided feedback on the BEPP data requirements and status of information. The way forward was explained to departments, with a strong focus on planning for the next 10 years and aligning capital planning between housing; roads and utilities.

As per the outcomes of each workshop listed above, it is clear that BEPPSCO serves as a powerful communication and integration platform in achieving requirements for the annual BEPP. The BEPPSCO serves as a communication link between the owners of the BEPP process and various technical departments. The agenda items, attendance register, together with the notes/minutes taken from each BEPPSCO meeting is included in Addendum 2.

The establishment of the BEPP has complimented the annual IDP process, through providing a collaboration platform between key service delivery departments. The BEPPSCO will continue as stipulated above and will form a key component of the annual budgeting and planning process highlighted in Section H after the final BEPP submission in June 2020.

## 7.2 Capital Planning System Technical Task Team

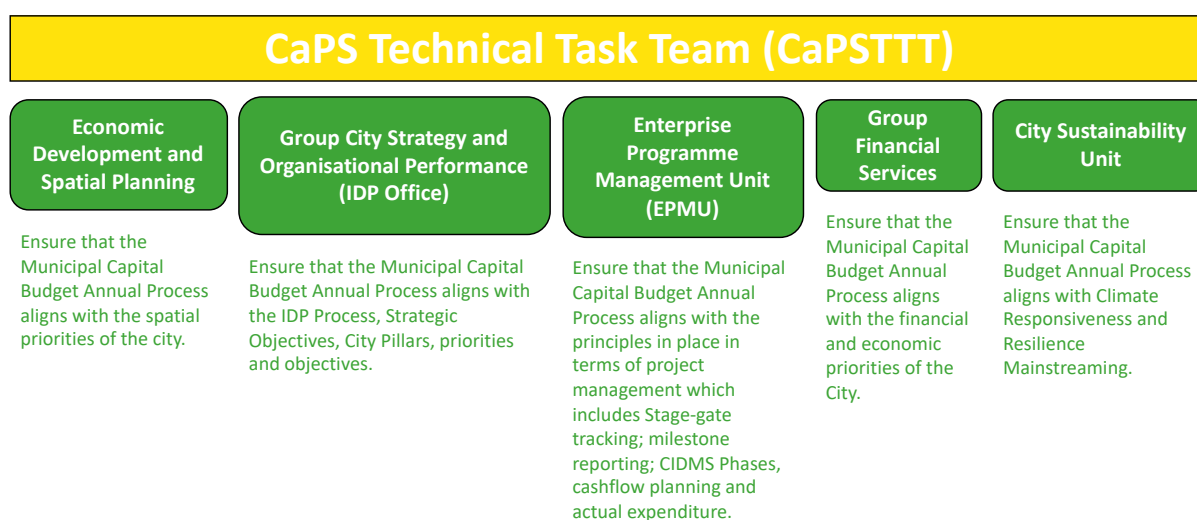
The establishment of the Capital Planning System Technical Task Team (CAPSTTT) have the purpose of providing a technically focused team of experts who provide guidance and technical input into achieving deliverables which align to the strategic, technical, financial and economic priorities of the City. The team manages, intervenes and reviews aspects that related to the CaPS process and the budget cycle environment, with specific reference to the detailed annual budgeting workplan outlined in Section H. Furthermore, CaPSTTT acts as the enabler of processes with various departments which form part of the annual planning and budgeting cycle. The team consists of technical experts within the following departments:

- Economic Development and Spatial Planning
- City Strategy and Organizational Performance (IDP Office)
- Enterprise Programme Management Unit (EPMU)
- Group Financial Services
- City Sustainability Unit

The inclusion of representatives from the City Sustainability Unit (CSU) to CaPSTTT ensures that mitigation and adaptation measures are successfully considered during the initial stages of project planning. This is achieved through technical assistance from CSU representatives during project planning and capturing processes. The inclusion of the CSU as a part of the CaPS process informs CR&R mainstreaming consideration during the CaPS process (refer to Figure 4).

The establishment of CaPSTTT will filter through to the current functions of the BEPPSCO and serves to inform and guide members of BEPPSCO regarding CaPS technical expertise and the strategic, technical, financial and economic priorities of the City (refer to Figure 9).

Figure 9 CaPSTTT Establishment



During the 2020/21 budgeting cycle, the CaPS TTT has met on a number of occasions to discuss and plan in accordance to the detailed work plan outlined in Section F. These sessions focus on planning and mitigating risks associated with major milestones within the annual budgeting cycle and has proved useful in confirming certain processes or timelines to be followed. Addendum 2 outlines the agenda's, meeting notes and attendance registers for each of the CaPS TTT planning meetings place to date.

### 7.3 City of Tshwane Strategic Investment Committee (STRIC)

The attraction, facilitation and expansion of fixed investment is seen as the most effective way of establishing and maintaining a healthy local economy, as it leads to higher economic growth and broadens the base of the local economy. Therefore; an efficient and effective institutional investment facilitation framework is essential for the creation and maintenance of a conducive investment and business environment. At the core of this framework is the fast-tracking of strategic and catalytic investment projects, in order to ensure seamless entry and successful implementation of all investment projects. This has given rise to the establishment of the City of Tshwane's Strategic Investment Committee (STRIC), which aimed at exploring institutional arrangements for the approval of catalytic and strategic investment Projects.

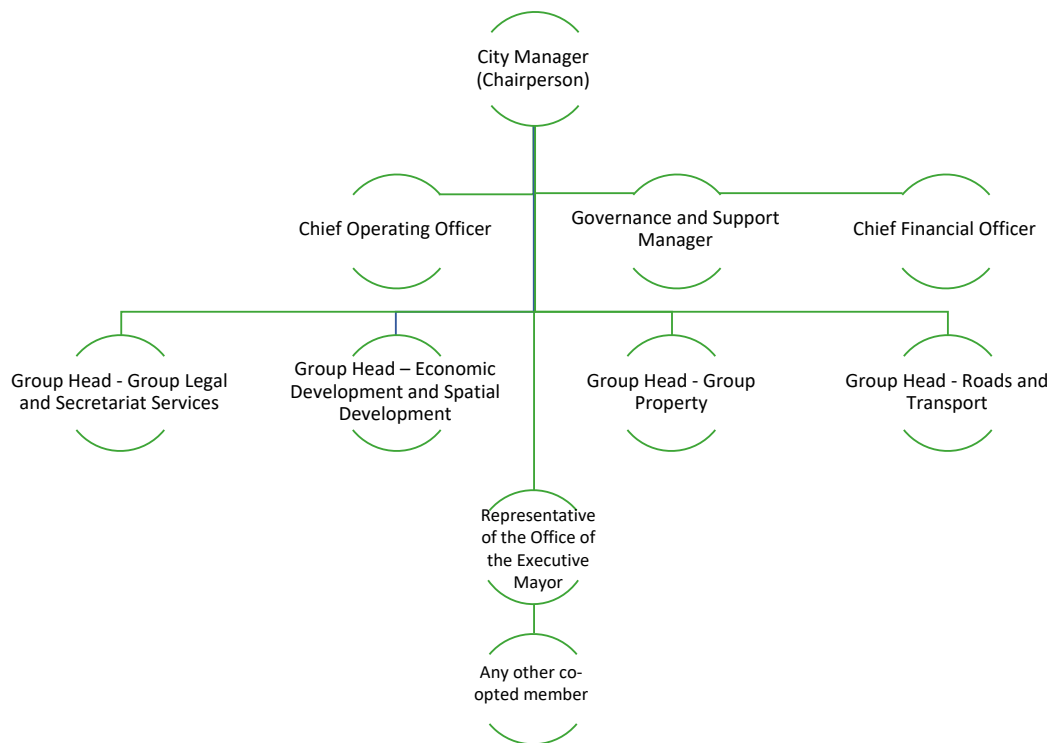
The re-alignment and re-engineering of the City of Tshwane Strategic Investment Committee (STRIC) report, reached a council resolution on 28 March 2019. The multi-disciplinary committee fulfils the role of a Programme Management Committee by approving, monitoring and overseeing the implementation of all catalytic and strategic investment projects and, inter-alia:



- Determine high level project implementation milestones (Project Delivery Charter);
- Summons project managers to provide monthly feedback on the progress of their respective PDC's;
- Provide investors with a platform to present their projects for possible inclusion as a catalytic and or strategic project;
- Determine high level project risks and design appropriate mitigation against such risks;
- Ensure resource mobilisation (budget / adjustment budget submissions; intergovernmental grants and subsidies);
- Ensure high-level co-ordination, monitoring and evaluation;
- Ensure optimal inter-departmental co-ordination and synergy in the execution / implementation of the project and manage stakeholder relations;
- Direct the necessary interventions to ensure that internal bottlenecks are resolved and facilitate (where applicable) the resolving of external bottlenecks;
- Inform Mayoral Committee (MayCo) of those projects granted preferential status and report thereafter on a monthly basis on progress / challenges and make proposals / recommendations to rectify these challenges (including the review of the status of a project); and
- Ensure that Broad Based Black Economic Empowerment (BBBEE), Job Creation and Skills Development objectives find expression in the delivery of these projects.

Figure 10 outlines the macro structure for the proposed STRIC (which will be chaired by the City Manager) and will be responsible for the overall approval process as well as the co-ordination of spatial development processes in line with the applicable legislative frameworks in guiding potential investors.

Figure 10 STRIC Membership



In order to structure the strategic investment approach and do away with the fast-tracking of strategic and catalytic investment projects in the City, it was necessary for the city to adopt uniform definitions, evaluation criteria, an implementation method and progress reporting system. The proposed three types of strategic investment projects have been identified as:

- Strategic Investment Initiatives;
- Catalytic Infrastructure Projects; and
- Strategic Urban Development (SUD).

To remove subjectivity from the process, the City adopted a set of evaluation criteria for each of the three project types. The evaluation criteria were applied to all candidate projects. Spatial, economic and social evaluation criterion were used to identify and prioritise the strategic investment projects. The results of such technical evaluation determined if an individual project could be classified for implementation by the City. The BEPP Integration Zones serve as a powerful platform in achieving projects' geographic locality, as well as MSDF & RSDF priority areas.

Each of the three project types in this strategic investment approach require a customised implementation method. With regards to Strategic Investment Initiatives (SII), qualifying investment proposals are submitted to the Strategic Investment Committee (STRIC). A collaborative approach with the city's relevant departments then enables Officials to be aware of the strategic nature of the projects. The process has the objectives to fast-track investments, to assist with the unblocking of service issues and to provide invested related advice to investors.

The City Strategy and Organisational Performance Department's Project Management Unit (ePMU) will oversee the implementation of Catalytic Infrastructure Projects. Catalytic Infrastructure Projects will be identified annually via the CaPS system and will be pronounced as such in the city's IDP and/or BEPP. The facilitation of Strategic Urban Developments requires a Profiling Report to be drafted by the City Planning and Development Division for each prioritised SUD for adoption by STRIC. All city departments will be bound to give priority to the facilitation and implementation of the SUDs. Each SUD is to be managed by a project manager allocated from the City Planning and Development Division.

Regular progress reporting on Strategic Investment Initiatives, Catalytic Infrastructure Projects and Strategic Urban Developments are of critical importance with the view of keeping the city's management informed of progress and ensuring implementation as per project schedules. Through consultation with key stakeholders, relevant Departments are to provide progress reports to STRIC and the the Mayco. The requirements for such progress reports will be included in the scorecard of various Department Divisions.

Given the extent of direct involvement of different role-players and departmental divisions; catalytic and strategic investment of projects will not be possible without a concerted effort between these role players. This is in order to coordinate their efforts led by a shared set of outcomes, a clear plan and a plan-led budget.

The BEPP Processes are identified to inform decisions that are made through STRIC and will aid in managing the Strategic Investment Initiatives, Catalytic Infrastructure Projects and Strategic Urban Development.

## **7.4 Grant Management Committee Establishment**

With the growing demand for services and limit of financial resources, it is imperative to have a coherent approach in the planning and execution of grant-funded projects within the City, in order to ensure maximum impact and outcomes. The current process of grant allocation to the City's departments is indicative of poor planning and lack of co-ordination amongst various grants.

As a proposed way-forward, the establishment of a Grants Management Committee will see various departments responsible for specific grant conditions, inter-alia aligning the submitted business plans and projects to the City's strategic priorities. The outcome of this process will be a submission and engagement with national Treasury, as well as various transferring authorities.

The Departments receiving grant funding need to demonstrate to the Tshwane Grant Management Committee (TGMC), that projects are ready to be implemented and no roll over will be requested at year-end.





## Section B: Spatial Planning and Targeting



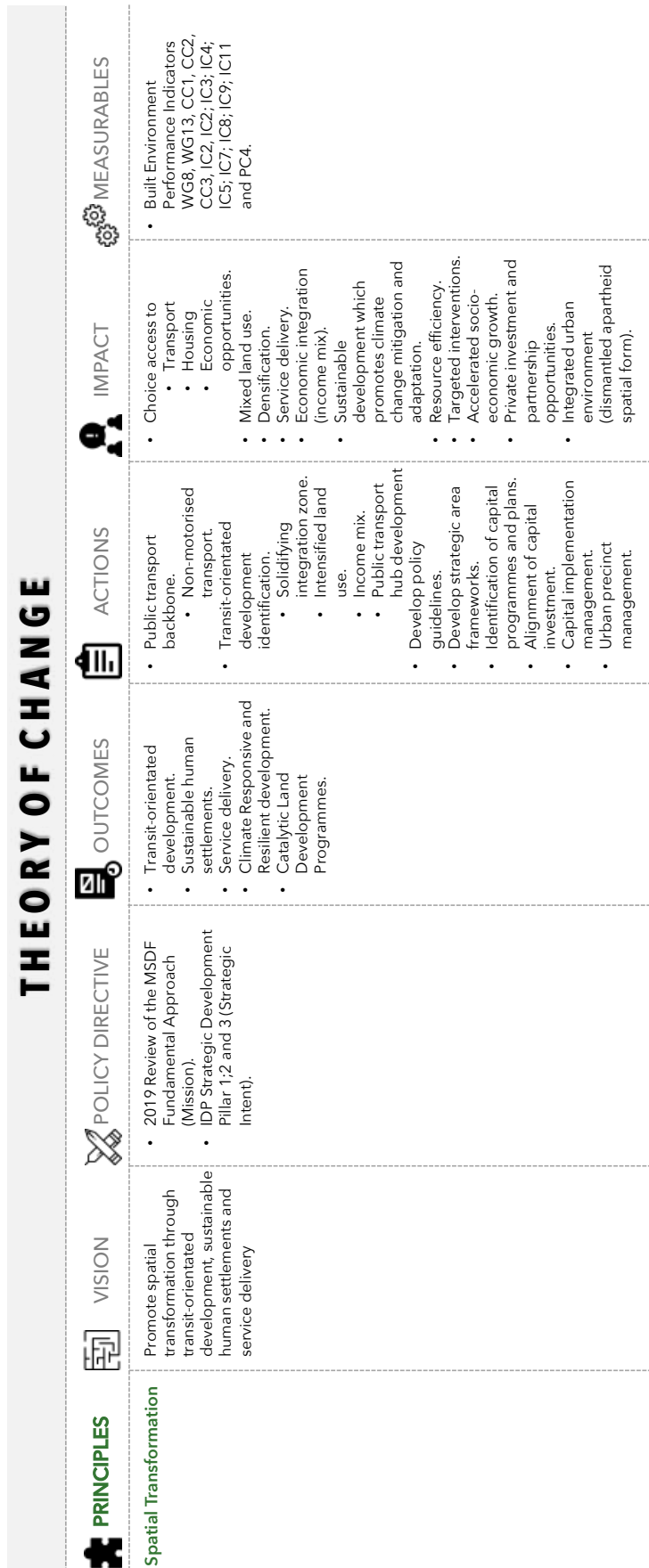
## Section B: Spatial Planning and Targeting

Spatial targeting is the deliberate focus of an action on a particular spatial area in order to achieve an improvement or transformation in the area as a result of the focussed action. These focussed actions could take the form of any policy instrument, namely planning reforms, design guidelines, urban management interventions, targeted capital investment or expenditure etc. In a legislative and performance measurement environment, it is a useful tool to assist organisations responsible for built environment interventions and management to achieve organisational objectives more effectively. Spatial targeting is possible under the following conditions:

- Spatial strategies of the organisation are expressed in strategic documentation;
- Planned interventions are spatially referenced;
- The scope of planned interventions or actions are clearly defined, and;
- The beneficiary or impact area of interventions are spatially referenced.

In terms of the City's Theory of Change, the concept behind spatial targeting aligns to the principle of spatial transformation and includes promoting transit orientated development, sustainable human settlements and service delivery. It is important to note the intra- and inter- dependency between that of financial sustainability and good governance principles (the other focal points of the City's Theory of Change). Spatial transformation requires sustainable funding resourcing and good governance principles to succeed, but also plays a vital role in determining the "where?" and "why?" for funding resourcing.

Figure 11 Theory of Change





The vision of the City to achieve spatial transformation derives from the National Development Plan 2030, the Draft 2019 MSDF's fundamental approach to spatial vision together with the IDP strategic vision to facilitate economic growth and job creation; to promote inclusivity; to deliver services and to protect the environment.

To achieve this the City needs to support the outcomes as set out in Figure 11 above through actioning the identification of a public transport backbone; transit orientated development; clear policy directives and strategic frameworks. Through actioning these outcomes, spatial transformation will promote densification in targeted areas through improved choice and access to transport options, sustainable housing and increased economic development and access to employment opportunities. This will also enable the City to prioritise areas for investment and to achieve the outcome of Catalytic Land Development Preparation (CLDP).

In terms of the BEVC, the following section has been structured to align to the starting premise of the value chain and describes the context of the Urban Network Structure (UNS) together with climate responsiveness and resilience relating to the City's spatial structuring elements.

Spatial targeting within the municipal environment, and specifically the BEPP, refers to the deliberate focussing of capital investment in spatially targeted areas in order to achieve municipal objectives more efficiently. Spatial targeting is thus focussed on optimising the spatial distribution of current and future capital investment in terms of the spatial structuring elements of the City, areas vulnerable to climate change impacts and other areas of strategic spatial and economic importance to the City.

During the 2019/20 reporting period, the City has embarked on aligning climate risk mitigation and adaptation as part of the spatial transformation principle. The information contained within this section will refer to both climate adaptation and mitigation strategies. From an adaptation point of departure, reference will be made to the Vulnerability Assessment to Climate Change report (2015) and for purposes of mitigation, reference will be made to the Green House Gas Emissions Inventory for 2014/15. In conclusion to this section, the institutional framework will include the way forward in terms of the City Sustainability Unit and actions which have been identified to mainstream Climate Change Mitigation and Adaptation.

## 8 Spatial Structuring Matrix

Policy makers, role players and thought leaders associated with the built environment profession often develop their own logical framework to make sense of the complex built environment. The result of these frameworks often results in a myriad of planning framework concepts, terminology and acronyms describing the same spatial structuring elements within the City. The resulting confusion around terminology and spatial structuring element naming conventions often leads to confusion, wasted discourse and potential misguidance. There is however a common thread that links all of the built environment planning framework concepts that was conceptualised over time, namely:

- a rationalisation of hierarchy of structuring elements;
- priority associated with structuring elements, and;
- the delineated areas of the structuring elements themselves.

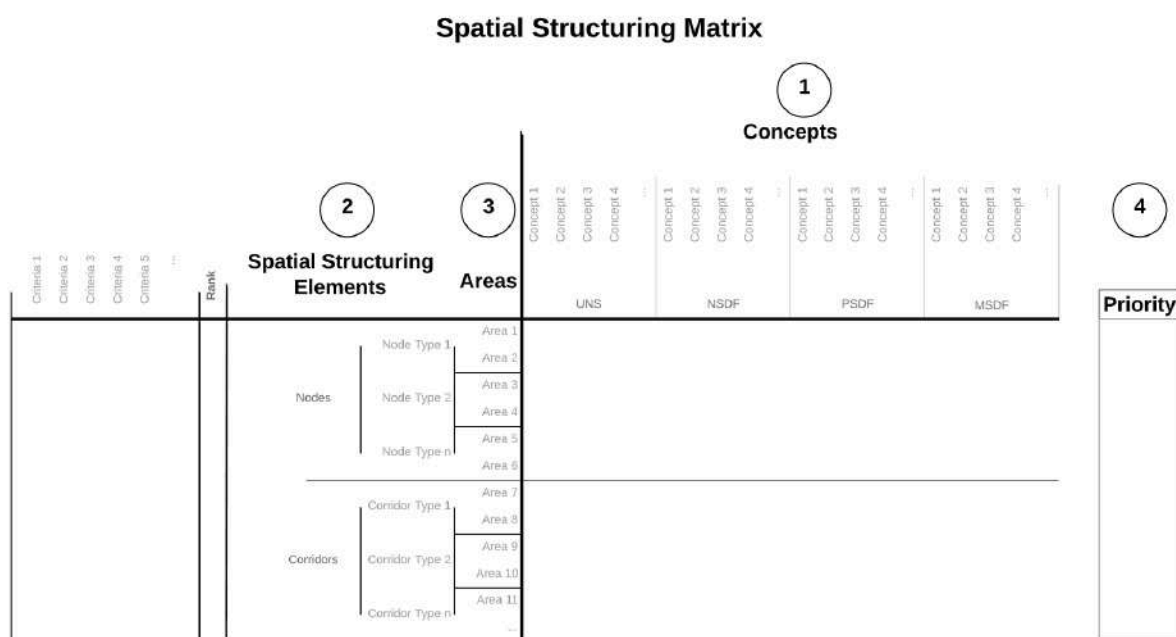
In order to eliminate confusion regarding terminology and naming conventions applied to spatial structuring elements within the City, a Spatial Structuring Matrix was conceived to create a common narrative for spatial structuring and spatial targeting for the City. The compilation of the City's Spatial Structuring Matrix intends to:

- Firstly, identify the different planning framework concepts that describe, guide and impact particular areas in the City;
- Secondly, determine the fundamental spatial structuring elements in the City;
- Thirdly, delineate and assign the areas in the City to the fundamental spatial structuring elements in the City, as well as the concepts governing the areas in the City;
- Fourthly, assign priority to the spatial structuring elements and areas in the City, and;
- Lastly, guide private sector as to what the spatial vision is for each spatial structuring element or area across all spheres of government (i.e. local, provincial and national government).

Figure 12 shows the key building blocks that comprise the Spatial Structuring Matrix, namely:

- Planning framework concepts;
- Spatial structuring elements;
- Areas, and;
- Priorities.

Figure 12 The key building blocks of the City's Spatial Structuring Matrix



## 8.1 Planning Framework Concept Alignment

The purpose of this section is to identify and define the different planning framework concepts that describe, guide and impact particular areas in the City.

Different spheres of government have introduced various spatial structuring concepts across the years, attempting to create a spatial definition and structuring toolbox for planners. By aligning the planning framework concepts into a single spatial structuring matrix, it will be possible to translate

different spatial definitions with each other, and in so doing, establishing clear parameters for each planning framework concept as well as the context where each planning framework concept is applicable. Only the most recent and relevant planning framework concepts will be used to compile the Spatial Structuring Matrix, and this does not represent a comprehensive historical assessment of planning framework concepts used to date.

### 8.1.1 Concept Sources Documents

The different planning framework concepts and rationales currently influencing the delineation of the City of Tshwane includes the following:

- National Treasury – Built Environment Performance Plan Guidelines: **Urban Network Structure**;
- National Department of Corporate Governance – **Capital Expenditure Framework Guidelines**: Functional Areas and Priority Development Areas;
- National Department of Rural Development and Land Reform – **National Spatial Development Framework**;
- Provincial Government of Gauteng – **Gauteng Spatial Development Framework**, and;
- City of Tshwane – **Metropolitan Spatial Development Framework**.

#### 8.1.1.1 Urban Network Structure

Custodian:	National Treasury
Origin:	Built Environment Performance Plan (2016)
Number of Spatial Structuring Concepts:	Seven (7)
Purpose:	To create a nationally unified language between the metropolitan municipalities with respect to spatial structuring elements.
Scale to which it applies:	Local or sub-regional

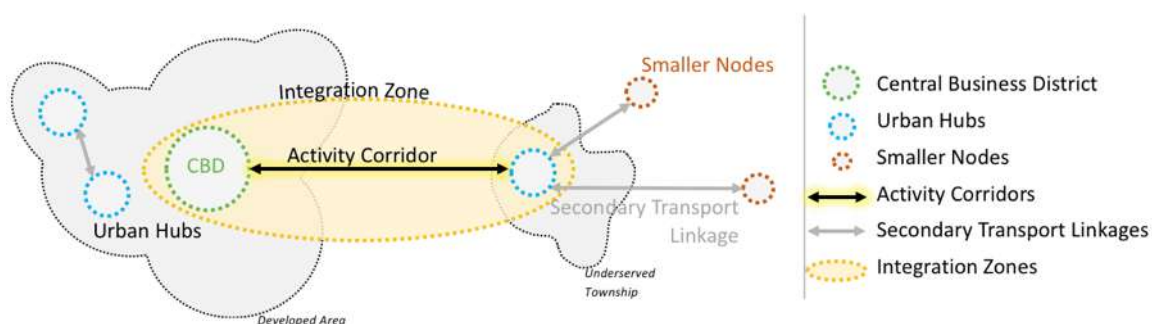


Table 4 Urban Network Structure – list of concepts

UNS List of Planning Framework Concepts
Activity Corridors

UNS List of Planning Framework Concepts
Central Business District
Integration Zones
Secondary Transport linkages
Smaller Nodes
Underserved Townships
Urban Hubs

### 8.1.1.2 Functional Areas and Priority Development Areas

Custodian:	National Department of Corporate Governance
Origin:	Capital Expenditure Framework Guidelines (2018)
Number of Spatial Structuring Concepts:	Two (2)
Purpose:	To define and delineate areas for socio-economic profiling, analysis, modelling and reporting.
Scale to which it applies:	Functional areas covers the municipal jurisdiction or sub-region, whereas Priority Development Areas have a local scale associated with them.

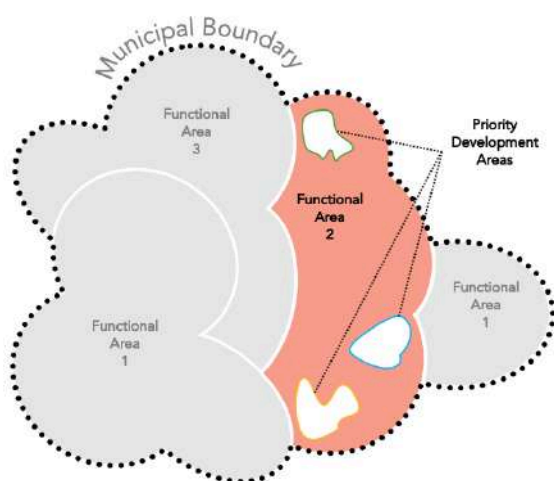


Table 5 CEF Guidelines – List of concepts

CEF List of Planning Framework Concepts
Functional Areas
Priority Development Areas

### 8.1.1.3 National Spatial Development Framework

Custodian:	National Department of Rural Development and Land Reform
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Origin:	Spatial Planning and Land Use Management Act (2013)
Number of Spatial Structuring Concepts:	Five (5) Outcomes Five (5) Sub-Frames Five (5) Action Areas 21 Structuring Elements
Purpose:	To give effect to national priorities, policies and desired land patterns.

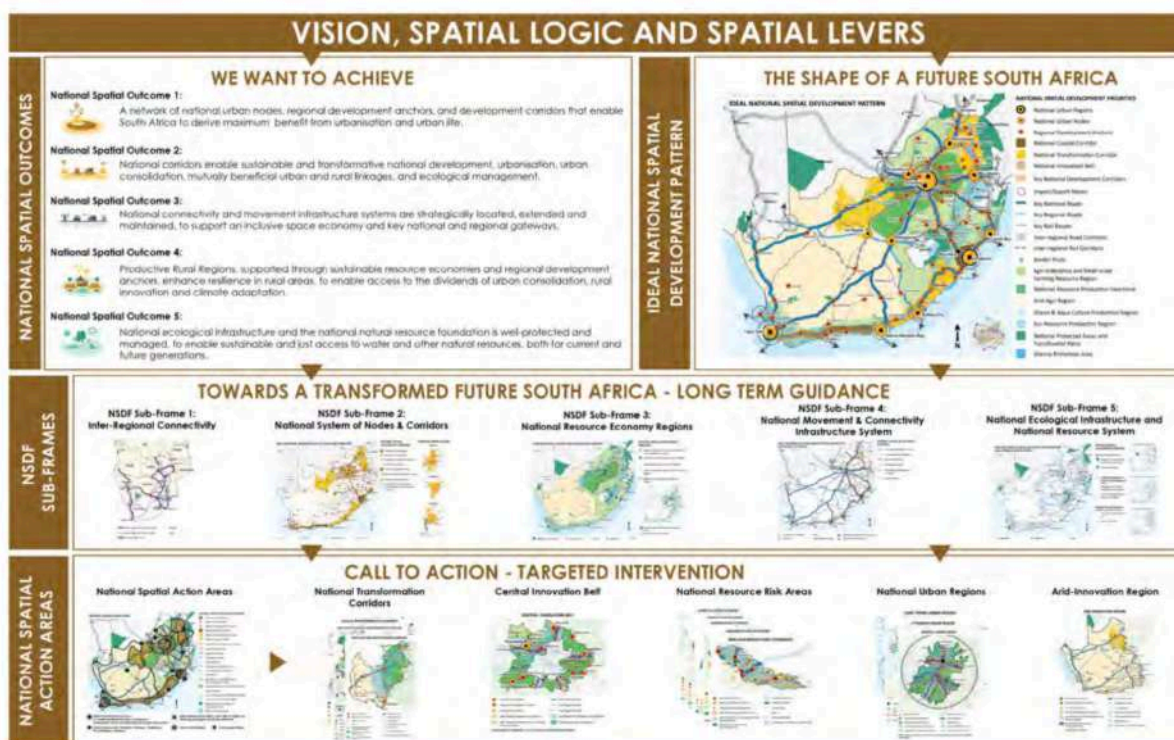


Table 6 National Spatial Development Framework – List of concepts

NSDF List of Planning Framework Concepts
Agri Enterprise and Small-Scale Farming Resource Regions
Arid Agri Region
Border Posts
Eco Resource Production
Import / Export Nodes
Inter-Regional Rail Corridors
Inter-Regional Road Corridors
Key National Development Corridors
Key National Roads
Key Rail Routes
Key Regional Roads

NSDF List of Planning Framework Concepts
Marine Protection Area
National Coastal Corridor
National Innovation Belt
National Protected Areas And Trans Frontier Parks
National Resource Production Heartland
National Transformation Corridor
National Urban Nodes
National Urban Regions
Ocean & Aqua Culture Production Region
Regional Development Anchors

#### 8.1.1.4 Provincial Spatial Development Framework

Custodian:	Gauteng Spatial Development Framework
Origin:	Spatial Planning and Land Use Management Act (2013)
Number of Spatial Structuring Concepts:	Five (5) Focus Areas 27 Structuring Elements
Purpose:	To give spatial development guidance within the Gauteng City Region.
Scale to which it applies:	Provincial and Sub-regional



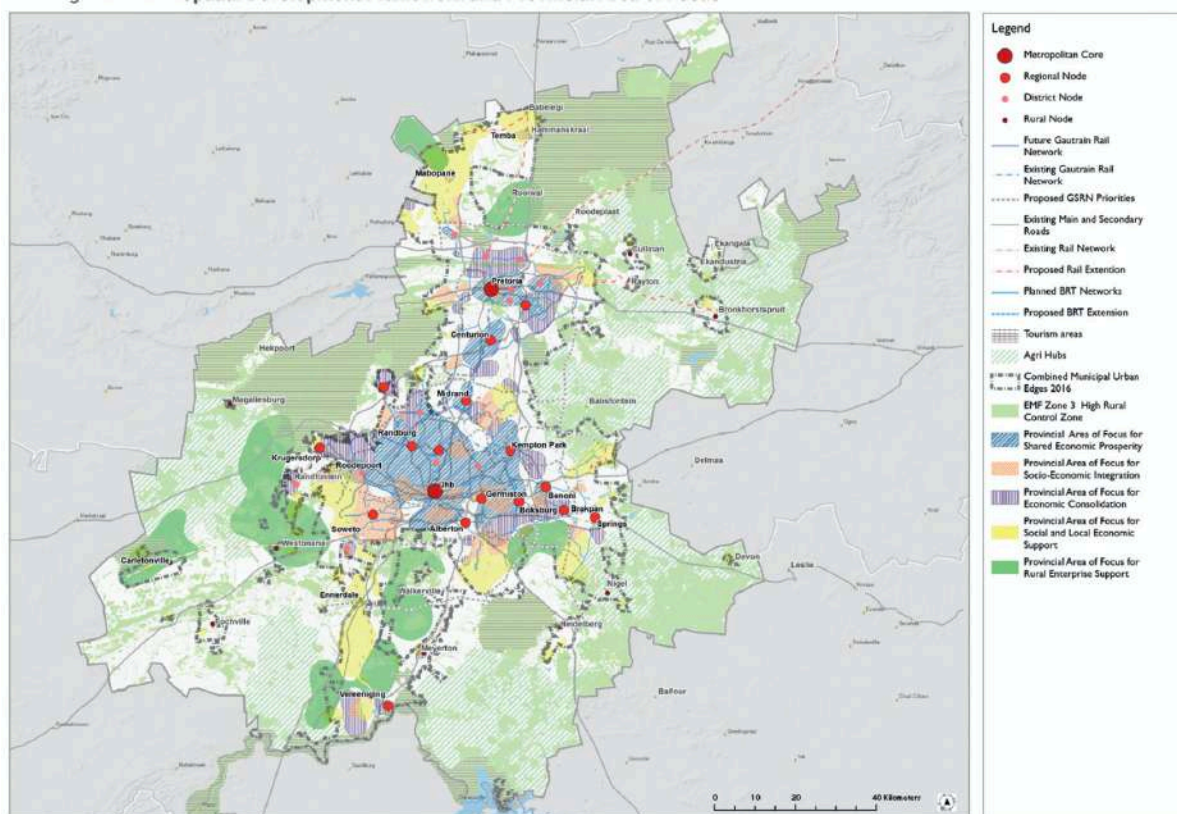


Table 7 Provincial Spatial Development Framework

Provincial SDF List of Planning Framework Concepts
Agri Hubs
BRT Network
Combined Urban Edge
District Node
EMF Zone 3
Gautrain Rain Network
Local Node
NDP Hub
Metropolitan Core
Proposed GSRN Priorities
Provincial Area of Focus for Economic Consolidation
Provincial Area of Focus for Rural Enterprise Support
Provincial Area of Focus for Shared Economic Prosperity
Provincial Area of Focus for Social and Local Economic Support
Provincial Area of Focus for Socio-Economic Integration
Rail Network
Regional Node
Rural Node
Tourism Areas

### 8.1.1.5 Metropolitan Spatial Development Framework

Custodian:	City of Tshwane
Origin:	Spatial Planning and Land Use Management Act (2013)
Number of Spatial Structuring Concepts:	More than 30
Purpose:	To provide a spatial representation of the City's spatial vision and to be a tool to integrate spatial planning concepts, which in turn guides spatial interventions and decision-making processes.
Scale to which it applies:	Sub-regional and local

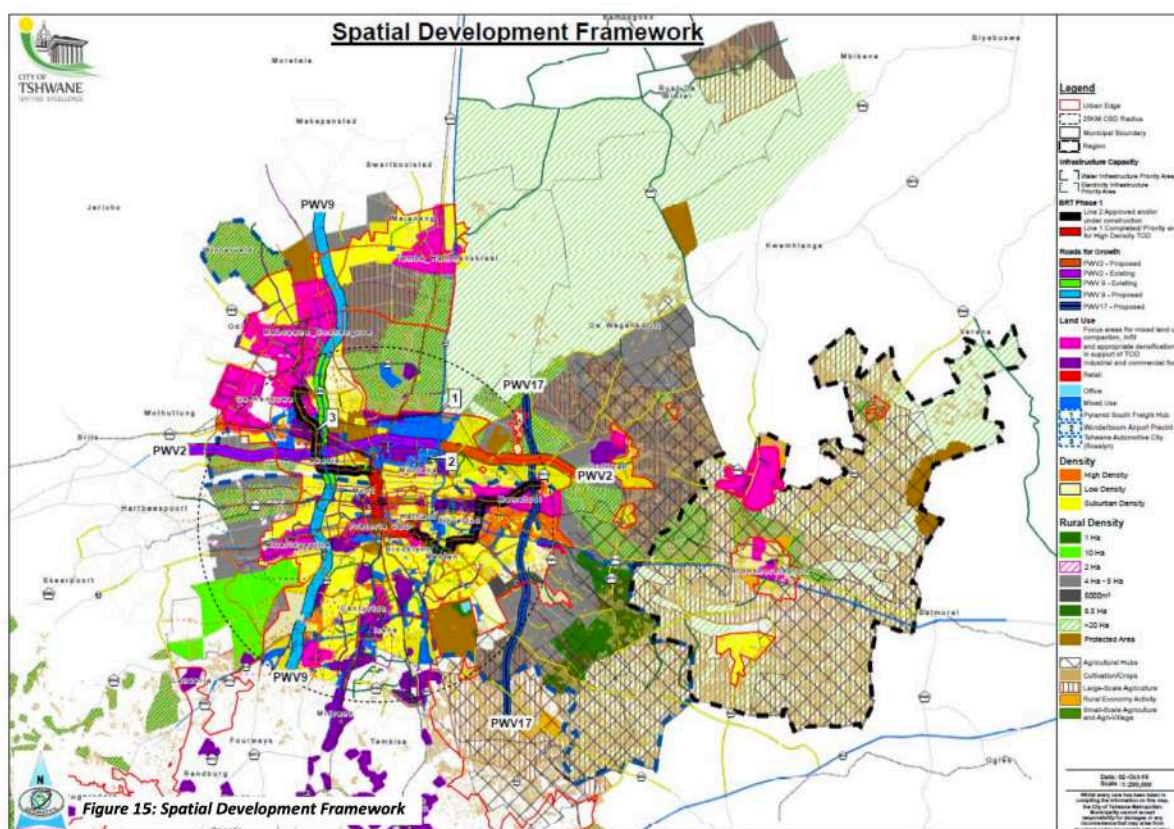


Table 8 Metropolitan Spatial Development Framework – List of concepts

MSDF List of Planning Framework Concepts
Agricultural hubs
BRT Phase 1 – Approved / under Construction
BRT Phase 1 – Completed
Cultivated Crops
Focus Area for mixed land use, compaction, infill, densification
High density
Industrial and commercial focus

MSDF List of Planning Framework Concepts
Large scale agriculture
Low density
Mixed Use
Office
Protected area
Retail
Road for Growth – PWV 17
Road for Growth – PWV 2
Road for Growth – PWV 9
Rural density
Rural Economy activity
Small scale agriculture and Agri-village
Suburban density
Urban Edge

### 8.1.2 Planning Framework Concept Summary

The concepts in each of the afore mentioned policies, guidelines and frameworks brings about specific outcomes as to what that policy, guideline or framework wishes to achieve in the City with regards to spatial planning and targeting. Each of these outcomes are captured in concepts and are baptised with their own unique terminology and naming conventions. These terminology and naming convention differences unfortunately often result in a great deal of interpretation variation and confusion within various sectors and distorts spatial targeting efforts.

The rationalisation of planning policy, guideline and framework concepts as a step towards achieving spatial targeting, can be compared to a game of darts. The organisations, internal divisions and departments or role-players represent the dart players. The dartboard itself represents the area of jurisdiction of the city. The bullseye represents what role-player wants to focus on, and the number of darts represents the limited resources and affordable interventions to achieve the desired outcome. Each organisation has defined their own bullseye, on the same dartboard; and are expecting players (organisations, internal divisions and departments or role-players) to throw their limited number of darts, at the target they defined as most important.

The problem defined above, in itself, cannot be changed by the City. However, the City can attempt to best align its spatial targeting initiatives, in line with evidence-based planning as opposed to abstract, concept-based planning – a transition from the status quo.

Figure 13 shows the terminology used in the different policies, guidelines and frameworks; attempting to describe the same areas. For more information on the definition of each term, please refer to the respective policy, guideline and framework documents cited.

Figure 13 Spatial Structuring Matrix – Part 1: Concepts

CONCEPTS	Urban Network Structure	CEF Guidelines	National SDF	Provincial SDF	Metropolitan SDF
	<ul style="list-style-type: none"> <li>Central Business District</li> <li>Urban Hubs</li> <li>Smaller Nodes</li> <li>Underserved Townships</li> <li>Integration Zone</li> <li>Activity Corridor</li> <li>Secondary Transport Linkage</li> </ul>	<ul style="list-style-type: none"> <li>Functional Areas</li> <li>Priority Development Areas</li> </ul>	<ul style="list-style-type: none"> <li>National Urban Regions</li> <li>National Urban Nodes</li> <li>National Transformation Corridor</li> <li>National Innovation Belt</li> <li>Key National Development Corridors</li> <li>Inter-Regional Corridors</li> <li>Agri-enterprise and Small-Scale Farming</li> <li>Eco Resource Production</li> </ul>	<ul style="list-style-type: none"> <li>Metropolitan Cores</li> <li>Regional Nodes</li> <li>Area of Rural Enterprise Support</li> <li>Area of Shared Economic Prosperity</li> <li>Area of Socio-Economic Integration</li> <li>Area of Economic Consolidation</li> <li>Area of Local Economic Support</li> </ul>	<ul style="list-style-type: none"> <li>Urban Cores</li> <li>Capital Core</li> <li>Precincts</li> <li>PWV 2</li> <li>High Density</li> <li>Rural Economy Activity</li> <li>Metropolitan Nodes</li> <li>BRT Phase 1</li> <li>PWV 17</li> <li>PWV 9</li> <li>Protected Areas</li> <li>Area for Mixed Development</li> <li>Low Density</li> <li>Agricultural Hubs</li> <li>Large Scale Agriculture</li> <li>Agri-Village</li> </ul>

## 8.2 Spatial Structuring Elements Classification Methodology

The purpose of this section is to provide a methodology which can be applied to determine the fundamental spatial structuring elements of a city. The proposed methodology identifies the most fundamental spatial structuring elements of a city, namely nodes and corridors – with a typological differentiation for each of the respective spatial structuring elements.

With respect to nodes, a structure analysis is proposed, comprising a four-part assessment:

- Private transport movement lattice – Accessibility;
- Public transport movement lattice – Interchanges;
- Public realm, and;
- Activity anchors and clusters.

With respect to corridors, the structural analysis proposed comprise a three-part assessment:

- Land use lattice – Origin and destinations;
- Population dynamics – Transport characteristics, and;
- Transport demand – Determining volumes.

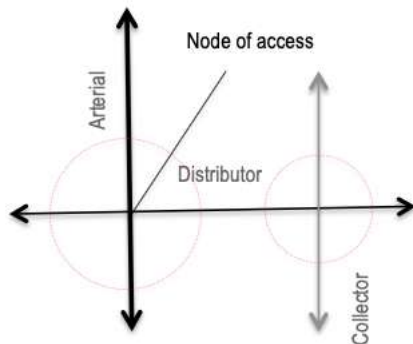
### 8.2.1 Nodal Assessment Methodology

#### 8.2.1.1 Private Transport Movement Lattice – Accessibility

The level of access is the primary determinant of an urban environment's nodal structure. Simply put, the greater the level of access to a particular point, the higher the development potential of that area. From a nodal identification and classification perspective, the greater the level of accessibility at a private transport network junction, the higher the nodal classification within the structuring hierarchy. To determine this, calculate the number of intersections between arterial, distributor and collector roads per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for nodal delineation.



Figure 14 Private Transport Movement Lattice – Accessibility

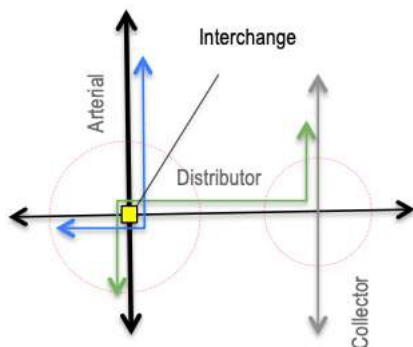


### 8.2.1.2 Public Transport Movement Lattice – Interchanges

The zones of greater access created by the private transport movement lattice and network hierarchy are often strengthened by a public transport system in the form of public transportation interchange points. These are places where transport modal and directional change are possible. Public transport interchanges are identified at the junction of a number of public transport service lines.

To determine this, calculate the number of public transport intersections, and calculate the number of public transport service lines and private transport intersections between arterial, distributor and collector roads per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for nodal delineation.

Figure 15 Public Transport Movement Lattice – Interchanges

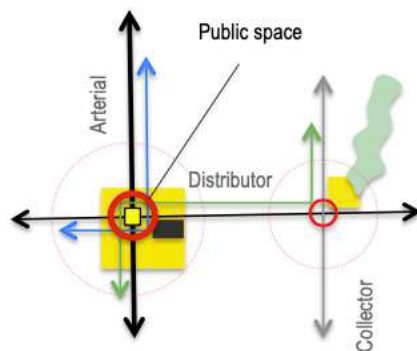


### 8.2.1.3 Public Realm

Owing to higher accessibility, public transport interchange points generate larger flows of people, which transforms the node into “public space”. These public spaces become landmark areas where public beacons and public amenities such as squares or parks are placed.

To determine this, calculate the number of public amenities per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for nodal delineation.

Figure 16 Public Realm

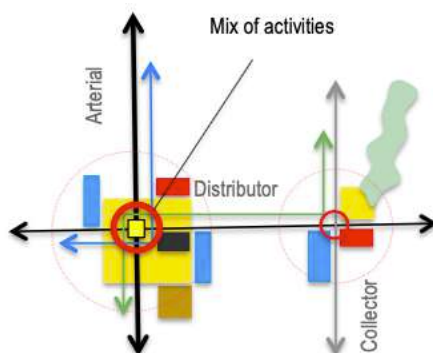


#### 8.2.1.4 Activity Anchors and Clusters

The heightened level of access and the extent of public interaction at prominent nodes provide an opportunity for government and the public to connect. Public nodes attract a mix of activities through the clustering of social and commercial activities at the points of highest accessibility. The clustering of facilities also promotes a form of demand management as a multiple of needs can be met by making one trip.

To determine this, calculate the inverse weighted area average area of commercial activities and social activities, per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for nodal delineation.

Figure 17 Anchors and Clusters



### 8.2.2 Corridor Assessment Methodology

#### 8.2.2.1 Population Dynamics – Transport Characteristics

An assessment of the demographic spatial orientation of the City include the evaluation of the population dynamics across the City; which includes population density, income levels, car ownership etc. When it comes to corridor identification, these dynamics plays a vital role when identifying future demand, the designing corridor characteristics such as modes of transport, and determining route alignment.

To determine this, calculate population density per evaluation area, the weighted average income levels per evaluation area, and car ownership percentage per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for corridor delineation.



### **8.2.2.2 Land-use Lattice – Origins and Destinations**

An assessment on the commercial and employment orientation of the City is significant when determining the different origins and destinations within a city. This essentially determines the starting point and ending point of the corridors. It directly relates to how people will move within the City.

To determine this, calculate the m2 of commercial usage per evaluation area, as well as the m2 residential usage per evaluation area. This calculation will contribute to the final score per evaluation area, which will form the evidence based underbuilt for corridor delineation.

### **8.2.2.3 Transport Demand – Determining Volume**

An assessment of exiting transport demand of the City is done, as it, together with the previous two characteristics, define the peak hour passenger trips per demand corridor per direction; which will give insight as to what the most efficient routes will be. Simply put, the more trips along a specific route, the better economic and social benefit will be when deploying a corridor along a specific route.

To determine this, calculate the peak hour passenger trips per direction per evaluation area. This calculation contributes to the final score per evaluation area, which forms the evidence based underbuilt for corridor delineation.

## **8.2.3 Spatial Structuring Element Typologies**

### **8.2.3.1 Nodes**

When considering the context and hierarchy of nodes within the City, it is evident that each node varies in its prominence and significance on a regional scale and is oriented to a different urban function. A number of nodes, however, have similar characteristics and may therefore have a similar function. Nodes can therefore be categorised by type and a list of generalised nodal types has been defined, with the intention to:

- Define fundamental spatial structuring elements;
- Outline key planning and urban design consideration as a launching point for more detailed nodal planning;
- Clarify expectation with regard to the intended role, function and character of a specific node, and;
- Differentiate in priority.

The following nodal typologies have been identified for the City in keeping with the various planning framework concepts discussed earlier. The following nodal typologies have been defined:

- **Transit Centre** - A transit centre is characterised as a hub of accessibility, served by multiple modes of transit. Owing to the convergence of transit activity, transit centres have a higher ranking within the station hierarchy and are typically centres of regional significance. As anchors of activity, transit stations within transit centres function as prominent public spaces and are characterised by generally higher levels of use. With consideration of the foot traffic that is generated within such a precinct, transit centres are typically characterised with a strong mix of transit supportive land uses, pedestrian focused design and an urban structure that is oriented to the station. Transit centres are characterised predominantly by non-residential land uses, but the provision of integrated

housing stock is becoming increasingly important. The urban form is characterised by small block sizes, higher site coverage, higher intensities and densities of development, the integration of civic open spaces, and minimal surface parking.

- **Activity Centre** - Activity centres represent significant centres of economic and cultural activity with regional-scale destinations that are well served by public transit. Activity centres are differentiated from transit centres by the orientation of land use. In the case of transit centres, land uses are orientated to the station i.e. land uses support the station, whilst in the case of activity centres, the station is oriented to the activity i.e. the station supports the land use. Owing to the intensity of activity, these centres may function as employment nodes, but also provide for a diverse housing stock. Much like transit centres, activity centres are characterised by small block sizes, high site coverage, higher intensities and densities of development, public space that serve as gathering spaces and minimal surface parking.
- **Employment Centre** - Employment centres are areas with specialised land uses with a focus on economic activity. Land use therefore typically comprises commercial, employment and civic uses with only a small residential component. Employment centres may have a regional or local function.
- **Community Centre** - Community centres function as local centres of economic and community activity served by one or more transit types that provide good access to regional centres. Community centres provide supporting services and opportunities to neighbourhood centres, but also have an important function with regards to housing provision and the mix of uses is therefore more balanced between residential and commercial/employment uses. Block sizes, site coverage, and development densities tend to be moderate in comparison to transit and activity centres.
- **Neighbourhood Centre** - Neighbourhood centres represent stations on the lower end of the station hierarchy. These stations have a localised function and are dominated by residential land uses. Non-residential land uses are limited to local-serving retail and community services. Residential densities in neighbourhood centres tend to be lower than those in community centres and are at their highest within the concentration and transit promotion zones.

### 8.2.3.2 Corridors

When considering the context and interaction towards corridors within the City, it is appreciated that each corridor varies in its prominence, significance, scale, and progress in development and so is oriented to different function(s). A number of corridors, however, have similar characteristics and may therefore have similar functions. The corridors can since be categorised by type. In so doing, a list of generalised corridor types has been defined with the intention to:

- Define fundamental spatial structuring elements;
- Outline key planning and urban design consideration as a launching point for more detailed corridor planning;
- Clarify expectation with regard to the intended role, function and character of a specific corridor, and;
- Differentiate in priority.

The following corridor typologies have been defined:

- Primary Movement Corridors – Primary movement corridors are corridors whose demand is in excess of 6 000 peak hour passengers per direction and are earmarked for trunk routes in the Integrated Public Transport Network.
- Secondary Movement Corridors – Secondary movement corridors are corridors whose demand is less than 6 000 peak hour passengers per direction and are earmarked for feeder routes in the Integrated Public Transport Network.

#### 8.2.4 Spatial Structuring Element Summary

Spatial structuring elements are grouped into two broad categories, namely Nodes and Corridors. These categories are then further refined into a hierarchy of elements. In the case on nodes, the hierarchy of elements translates as follows:

- Transit Centres
- Activity Centres
- Employment Centres
- Community Centres
- Neighbourhood Centres

In the case of corridors, the hierarchy of elements translates as follows:

- Primary Movement Corridors
- Secondary Movement Corridors

Figure 18 shows a summary of the fundamental spatial structuring elements, together with their typological elements.

Figure 18 Spatial Structuring Matrix: Part 2: Spatial Structuring Elements



### 8.3 Concept Alignment and Area Assignment

The purpose of this section is to firstly align key concepts within the constellation of concepts to the fundamental spatial structuring elements, and secondly to assign the various areas in the City to the fundamental spatial structuring elements identified as part of the planning framework concepts

above. The proposed methodology to determine which areas are assigned to which spatial structuring element comprises of a spatially based multi-criteria assessment. This methodology is specifically suitable as it can compare various attributes of each comparable unit, often in hexagon format. The most suitable spatial structuring element, based on the criteria of each, will then be assigned to the comparable units, and then assigned to the areas associated to the said units. The MSDF has followed an evidence-based approach when identifying the city's spatial structuring elements.

### **8.3.1 Concept Alignment**

In Chapter 8.1, a multitude of concepts used to describe and classify functional spaces in the City was described and unpacked. Even though all frameworks can be related to each other, given the focus of the BEPP, this document will specifically relate the National Treasury Urban Network Structure, and the City of Tshwane Metropolitan Spatial Development Framework to each other.

Figure 19 shows how the Urban Network Structure concepts (Green) and the Metropolitan Spatial Development Framework (Yellow) relate with respect to the fundamental spatial structuring elements. It also shows that there is no one-to-one relationship between the elements, and that some criteria or characteristics per concept relate to some fundamental spatial structuring elements exclusively.

Figure 19 Spatial Structuring Matrix: Part 3A: Spatial Structuring Elements and Concept Alignment

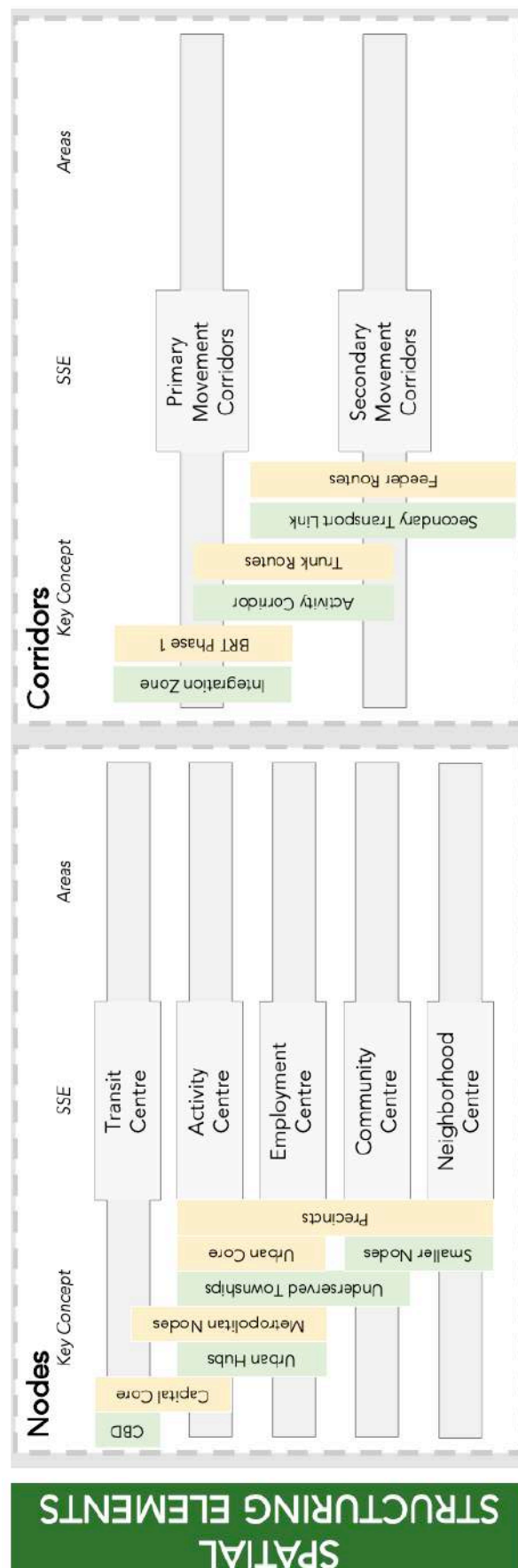
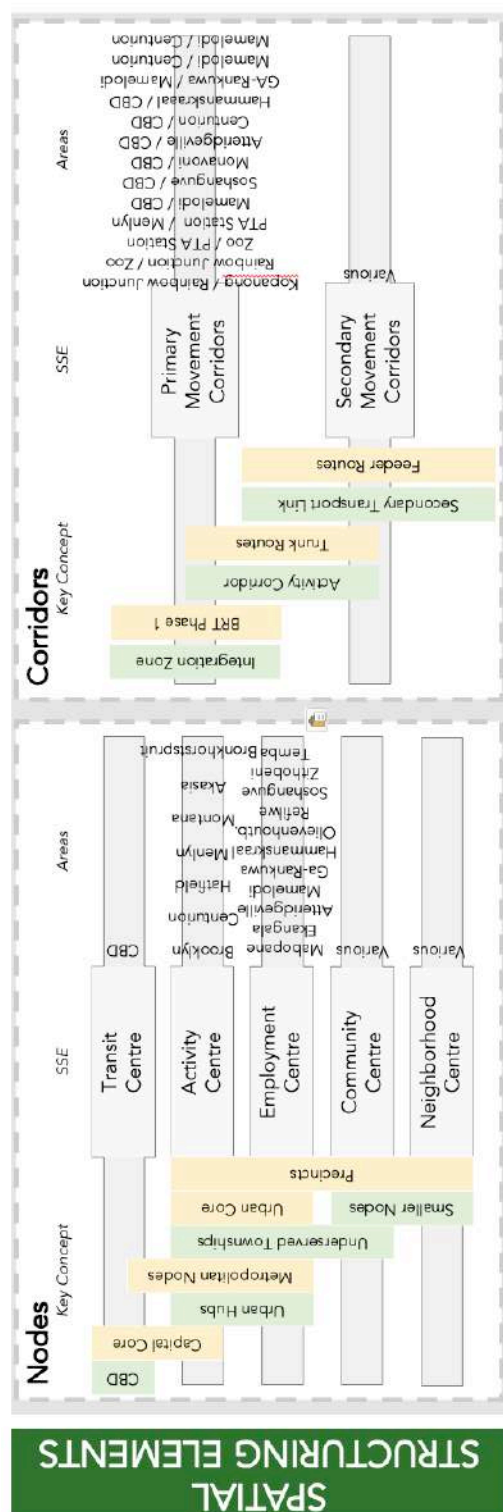


Figure 20 shows the relationship between the functional areas within the City, with respect to the fundamental spatial structuring elements and the key planning framework concepts put forward by the Urban Network Structure and the Metropolitan Spatial Development Framework.

Figure 20 Spatial Structuring Matrix: Part 3B: Spatial Structuring Elements and Area Assignment



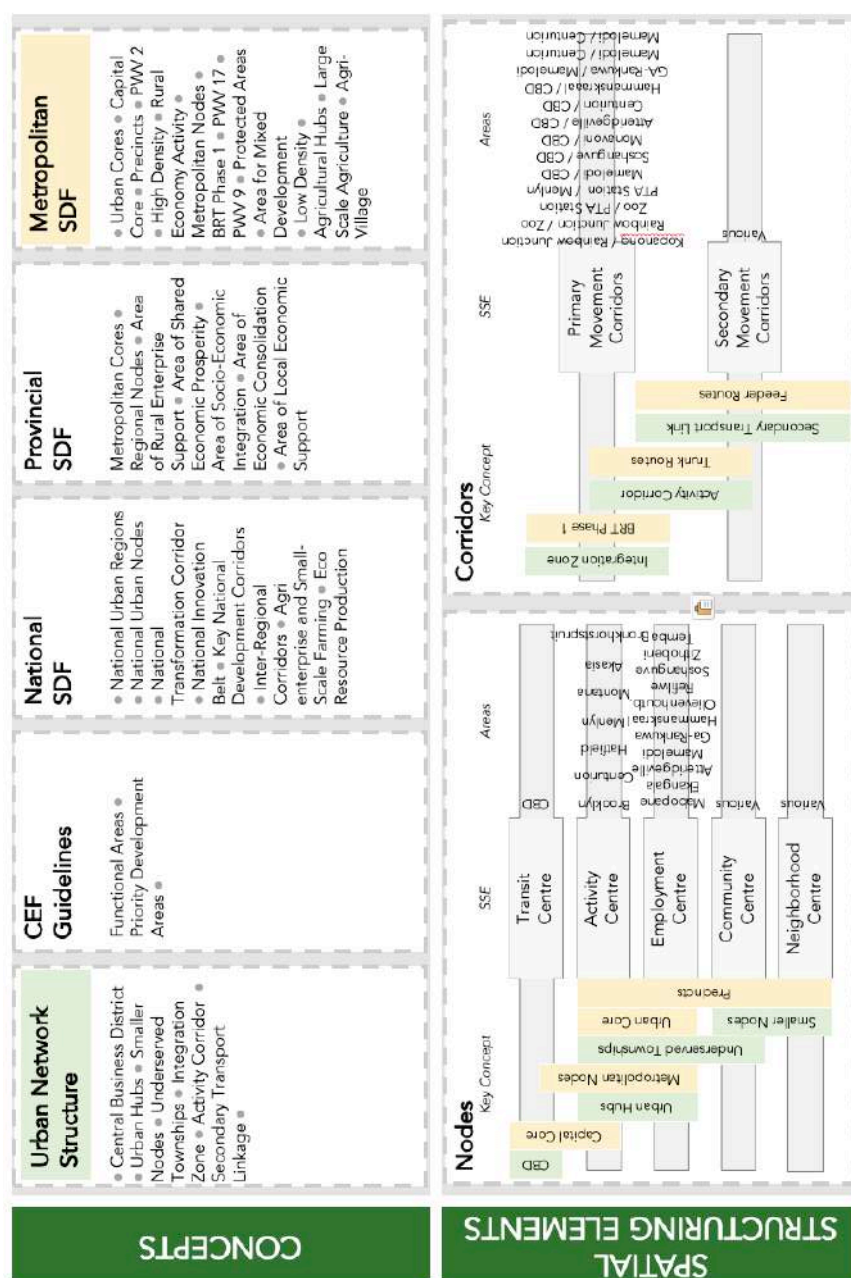


### 8.3.3 Spatial Structuring Matrix

Figure 21 serves as the spatial structuring matrix which applies to the City of Tshwane. The purpose of the spatial structuring matrix is as follows:

- Identify the different planning framework concepts that describe, guide and impact particular areas in the City;
- Provides a set fundamental spatial structuring element, and;
- Assign areas in the City to the fundamental spatial structuring elements and the key concepts driving investment in the City.

Figure 21 Spatial Structuring Matrix



## 8.4 Priority Development Areas (PDAs)

### 8.4.1 Identification and Delineation of PDAs

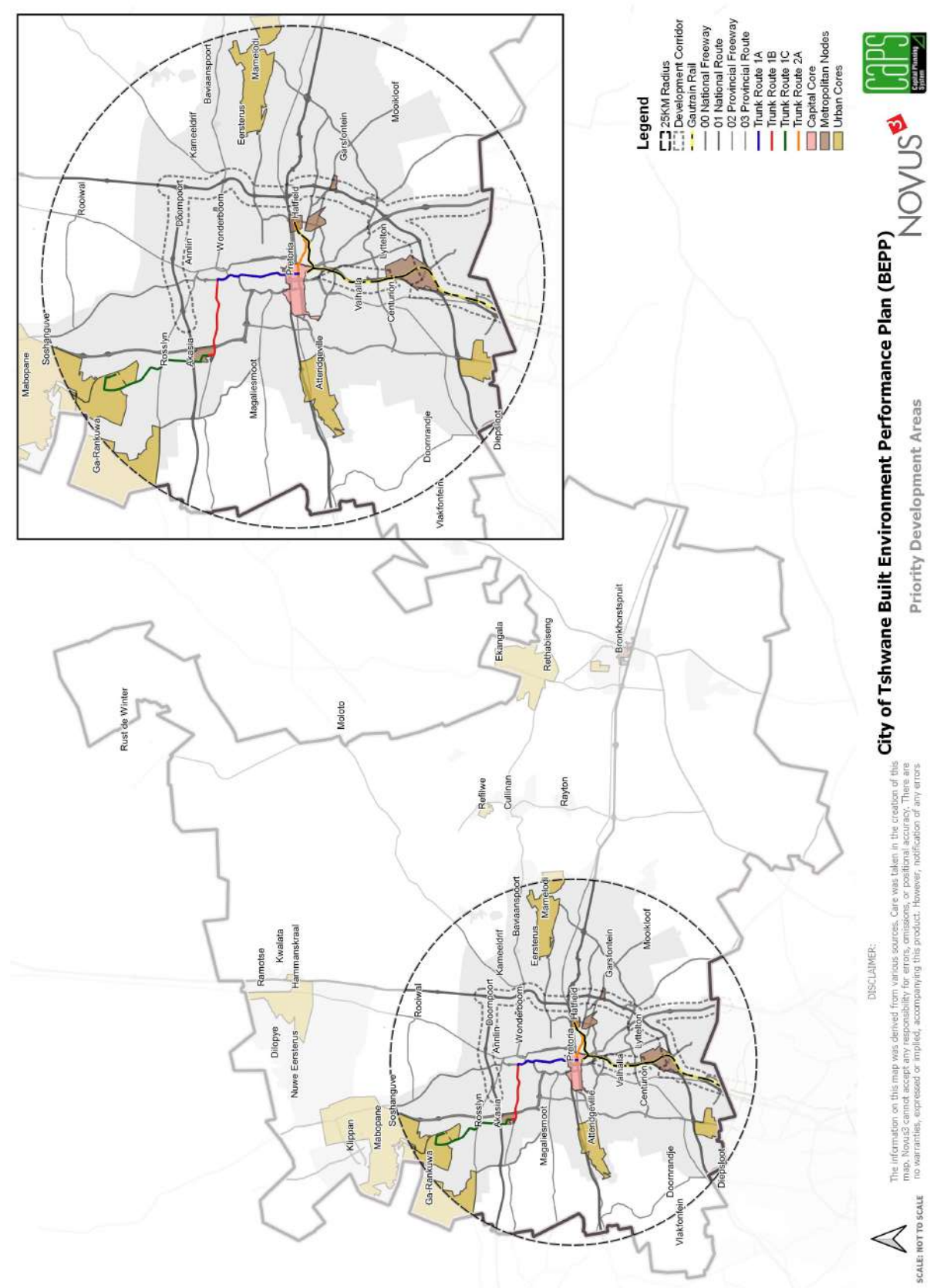
Spatial structuring elements in the City do not all carry the same importance or rank in terms of the spatial strategy and implementation timeframes. Furthermore, the City's available resources to fund capital investment interventions is limited and the capital demands associated with urban development far outstrips the available resources. The City therefore needs to identify, delineate and allocate a relative ranking or priority between the different spatial structuring elements, as part of a PDA approach, in order to achieve the following:

- Spatial restructuring;
- Economic growth;
- Sustainable development.

The PDAs of note of the City of Tshwane, based on the Spatial Structuring Matrix and its adjoining hierarchy of concepts and fundamental spatial structuring elements are defined in terms of nodes and corridors – each grouping with its own priority. These include:

- Nodes: There are three categories of nodes that are regarded as priority development areas. These include, in order of priority, the CBD (which comprise of the Pretoria Inner City), the Metropolitan Nodes (i.e. Brooklyn, Centurion, Hatfield, Akasia and Bronkhorstspuit), and the Urban Cores, otherwise referred to by the UNS as the underserved township areas (i.e. Mabopane, Ekangala, Atteridgeville, Mamelodi, Ga-Rankuwa Hammanskraal, Olievenhoutbosch, Refilwe, Soshanguve, Temba and Zithobeni).
- Corridors: Even though all planned activity corridors in the City can be regarded as having a high priority, it is paramount to focus on corridors where existing infrastructure implementation initiatives are being implemented. The PDA in terms of corridors specifically relate to the activity corridor already constructed or under construction, which comprise of IPTN Phase 1, with a 500m and 800m permeable walkability buffer. IPTN Phase 1 links Hatfield and the Pretoria Inner City. From the Pretoria Inner City, it links with the Pretoria Zoo from where it links northwards to Wonderboom and Rainbow Junction. This does not take away from the impetus placed on the PWV-9 project of provincial government, nor implies that the City does not recognise the potential of the PWV-9. Given the available levers of the City, and the criteria for corridors with respect to the BEPP, i.e. already constructed or under construction, the PWV-9 does not qualify in this category.

Figure 22 Priority Development Areas for the City of Tshwane



A further differentiation is developed by the City, comprising of Precincts and Integration Zones. The purpose of this differentiation is to elevate the importance of areas within the PDAs. This is done by differentiating on virtually a block level, between PDAs.

### 8.4.2 Precincts

The city has identified a number of precinct plans that will serve to target spatial planning interventions and capital investment within the respective regions. These precinct plans will unlock socio-economic support, economic growth opportunity and assist in developing liveable vibrant community spaces.

The list of envisioned precinct plans for the city, underwent a process of internal prioritisation to identify priority precinct plans for short-, medium- and long-term implementation. Table 9 shows the results of the precinct prioritisation process in terms of implementation priority and region, together with the actions required.

Table 9 Prioritised Precincts

Spatial Policy	Comment	Review of Existing Plan?	New Plan Required?
<b>Region 1 – Short Term Implementation</b>			
Pretoria North Precinct Plan	Needed urgently as a large amount of application has been received and current SDF policy is outdated.	Yes	Pretoria North Precinct Plan
Ga-Rankuwa Gateway Node precinct plan.	Needed urgently as a large amount of application has been received and current SDF policy is outdated.	Yes	
Tshwane Automotive City (TAC) Precinct Plan	Medium Term priority and normally work is being completed and it also on-going.		Yes
<b>Region 1 – Medium Term Implementation</b>			
Mabopane Station / Soshanguve station Precinct plan	Medium Term priority and normally work is being completed and it also on-going.	Yes	
<b>Region 1 – Long Term Implementation</b>			
Development Guidelines and access management along Activity Spines and Streets in the Soshanguve Areas.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 1B & C. Exact route and station locations are needed.		Yes
Spatial Development Framework for the Akasia Metropolitan Core.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 1B & C. Exact route and station locations are needed.		Yes
Spatial Development Framework / Urban Design Framework for BRT Line 1 B & C.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 1B & C. Exact route and station locations are needed.		Yes

Spatial Policy	Comment	Review of Existing Plan?	New Plan Required?
<b>Region 2 – Short Term Implementation</b>			
Wonderboom Airport Precinct Plan			Yes
Tshwane Freight and Logistic Hub Precinct Plan			Yes
<b>Region 2 – Medium Term Implementation</b>			
Onderstepoort and Haakdoornboom Precinct Plan		Yes	
Rainbow Junction Development Node Precinct Plan		Yes	
Hammanskraal CBD Precinct Plan		Yes	
<b>Region 3 – Short Term Implementation</b>			
Hatfield Urban Design Framework for public space and streets.	Work has started. The University of Pretoria have appointed consultants to do Hatfield Urban Design Framework for public space and streets.		
Spatial Development Framework / Urban Design Framework for BRT Line 1 A.	Draft Framework has been approved by Council for public participation purposes.		Yes
Spatial Development Framework / Urban Design Framework for BRT Line 2 A.	Draft Framework has been approved by Council for public participation purposes.		Yes
Hazelwood Node Urban Design Framework for public space and streets.	Work has started by private sector. Line 1A is operational and needs a plan.		
Salvokop Urban Design Framework	The work has been done by the Private sector.		
<b>Region 3 – Medium Term Implementation</b>			
Spatial Development Framework / Urban Design Framework for BRT Line 2 B.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 2 B. Exact route and station locations are needed.		Yes
Lotus Gardens and Fort West Precinct Plan	Can only commence with plan / framework once detail design has been finalized in terms of BRT for the west. Exact route and station locations are needed		Yes
Marabastad and West Capital Precinct	The Precinct is experiencing some development especially the social housing and urban management pressure		Yes
Koedoespoort Industrial Area Management			Yes
Eugene Marais Hospital Precinct			Yes
<b>Region 3 – Long Term Implementation</b>			

Spatial Policy	Comment	Review of Existing Plan?	New Plan Required?
A precinct plan for the Council property in Menlo Park/Ashlea Gardens on 26th street.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 2 B. Exact route and station locations are needed. Project should be done Property Management section.		
Arcadia North, Eastclyfe, Eastwood, Kilberry and Lisdogan Park	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 2 B. Exact route and station locations are needed.		Yes
<b>Region 4 – Short Term Implementation</b>			
Precinct Plan for Gautrain Station (Centurion/ West Avenue).	Needed urgently as a large number of applications have been received and current SDF policy is outdated. Growth Point prepare to pay for the upgrade in West Avenue in association with Tshwane Engineering Departments.	No	Yes
Urban Design Framework and Infrastructure Management Framework for the Centurion Metropolitan Core.	Needed urgently. The construction of the terminus not in line with previous plan will have a profound influence in the development of the rest of the development envelop of the precinct. New plan should give direction to the development of the rest of the precinct to include the future development of the International Convention centre and rest of mixed-use land uses in terms of the BCX agreement.	Yes	Yes
<b>Region 4 – Medium Term Implementation</b>			
Urban Design Framework and Infrastructure Management Framework Monavoni Nodal Area (extension to Lanseria Regional Spatial Policy above).		Yes	
Urban Design Framework and Infrastructure Management Framework for the Kosmosdal/ Samrand/ Olievenhoutbos area.		Yes	
Urban Design Framework and Infrastructure Management Framework and Road infrastructure plan for the Raslouw AH		Yes	
<b>Region 4 – Long Term Implementation</b>			
Precinct plan for the provision of services and guideline for			Yes



Spatial Policy	Comment	Review of Existing Plan?	New Plan Required?
development in green area for the eastern boundary outside of the urban edge where rapid development associated with the Lanseria Regional Spatial Policy, currently being drafted by Gauteng			
<b>Region 5 – Short Term Implementation</b>			
Derdepoort area TAC Precinct			Yes
Refilwe-Cullinan Tourism Precinct and Rayton-Cullinan Tourism Precinct			Yes
Gem Valley, Glenway and Leeuwfontein area			Yes
<b>Region 6 – Medium Term Implementation</b>			
Spatial Development Framework / Urban Design Framework for BRT Line 2 C and D.		Yes	
Denneboom and Surrounding Precinct Plan		Yes	
Greater Mamelodi Transitional zones (Train station) Precinct plans			Yes
Max City and Surround Precinct.			Yes
Mooiplaats Area Precinct. For areas within the Urban Edge currently under mixed use development pressure.			Yes
<b>Region 6 – Long Term Implementation</b>			
Menlyn Node Urban Design Framework for public space and streets.	Can only commence with plan / framework once detail design has been finalized in terms of BRT Line 2C. Exact route and station locations are needed. Project should be done Property Management section.		
<b>Region 7 – Short Term Implementation</b>			
Sokhulumu Agri-village	The area does not have a plan guiding spatial planning and land use management. This area only depends on the Agri-village concept to guide land use.		Yes
<b>Region 7 – Medium Term Implementation</b>			

Spatial Policy	Comment	Review of Existing Plan?	New Plan Required?
Ekgangala Area	There is an application for a proposed mall in the area which has not been finalise. This will be a catalyst for other developments.		Yes
<b>Region 7 – Long Term Implementation</b>			
Zithobeni Area			Yes

### 8.4.3 Integration Zones

Based on the Spatial Structuring Matrix, it is clear that the concept “Integration Zone” originates from the Urban Network Structure as defined by National Treasury. Considering that this document, the BEPP for 2020/21, serves to report on the UNS, particular focus will be given to the Integration Zone within the City of Tshwane.

#### 8.4.3.1 Definition

The definition of an integration zone, as per the Urban Network Structure, are defined as:

*The Urban Network consists of a number of Integration Zones. Each zone is a part of a city or city region-wide TOD network. An integration zone is a spatial planning element facilitating spatial targeting of investment aimed at spatial transformation. Each zone consists of a transit spine connecting two anchors via mass public transport (rail/bus), e.g. the CBD and an “urban hub” (township node with the best investment potential). It can also comprise of the CBD and another primary metropolitan business node. Between the two Integration Zone anchors are a limited number of Integration Zone intermediate nodes that are strategically located at key intersections connecting to marginalised residential areas (townships and informal settlements) and economic nodes (commercial and industrial nodes) via feeder routes. The Urban Hub connects to secondary townships nodes within the marginalised peripheral township. The Integration Zone includes a hierarchy of TOD precincts located and prioritised within the structure of nodes described above.*

From the definition above, it is clear that an integration zone is the preverbal “string”, in the “beads on a string” concept. The basic elements necessary to define an integration zone are therefore as follow:

- Transit spine;
- Nodal anchors;
- Intermediate nodes / precincts, that intersect with feeder routes.

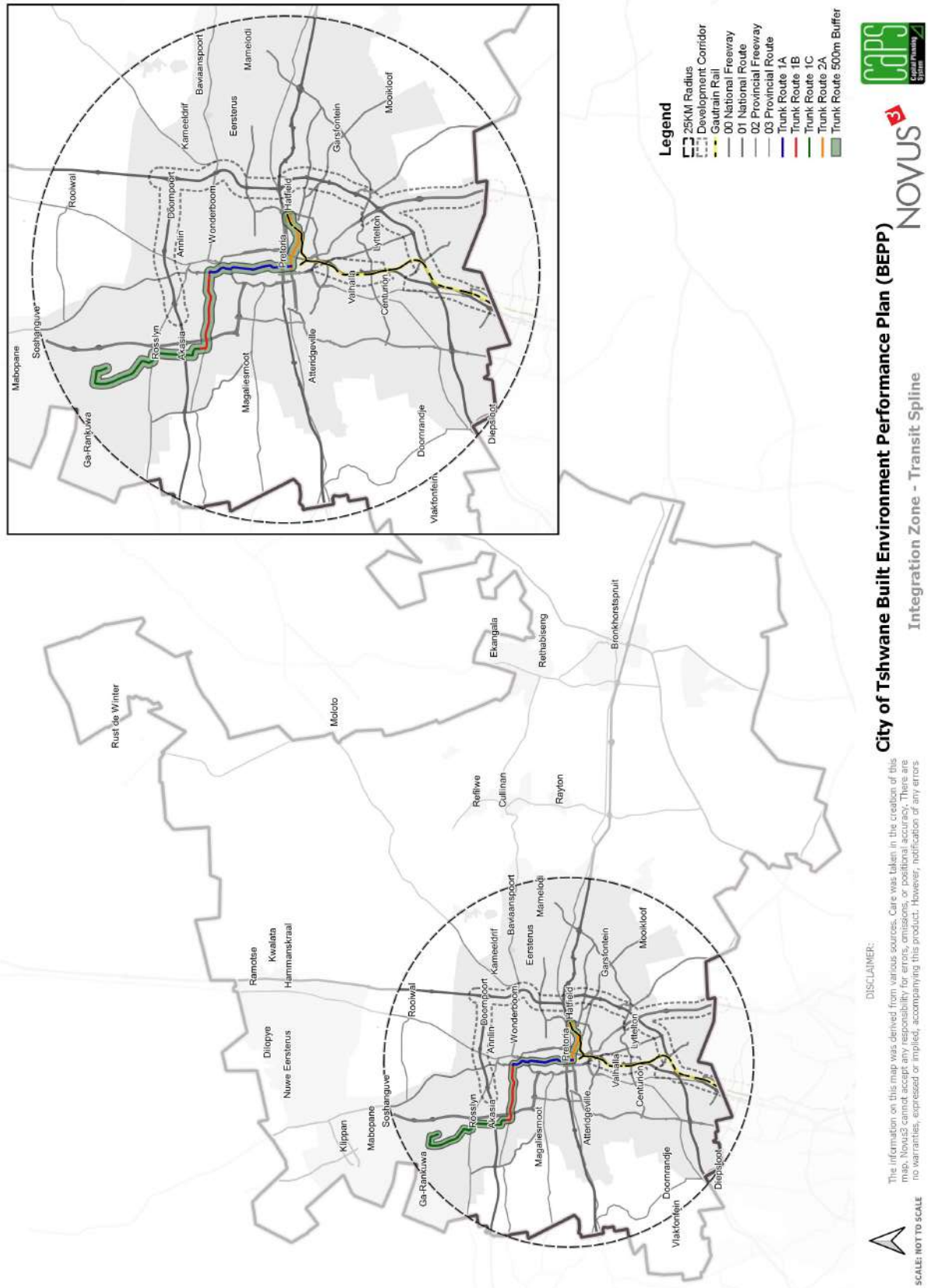
#### 8.4.3.2 Transit Spines

From the latest approved IPTN operations plan (2014), it is clear that several transit spines have been identified in the City. However, to date, not all of the transport spines have been constructed – and given the current rate of funding and implementation progress it must be assumed that the majority of the transport spines will not be constructed in the medium term. The City will therefore only focus on transit spines that are already constructed, namely:

- Line 1 A Trunk Route (From Kopanong to Rainbow Junction);

- Line 1 B Trunk Route (From Rainbow Junction to the Zoo);
- Line 1 C Trunk Route (From the Zoo to Pretoria Station), and;
- Line 2A Trunk Route (The Pretoria Station to Menlyn).

Figure 23 Integration Zone – Transit Spine

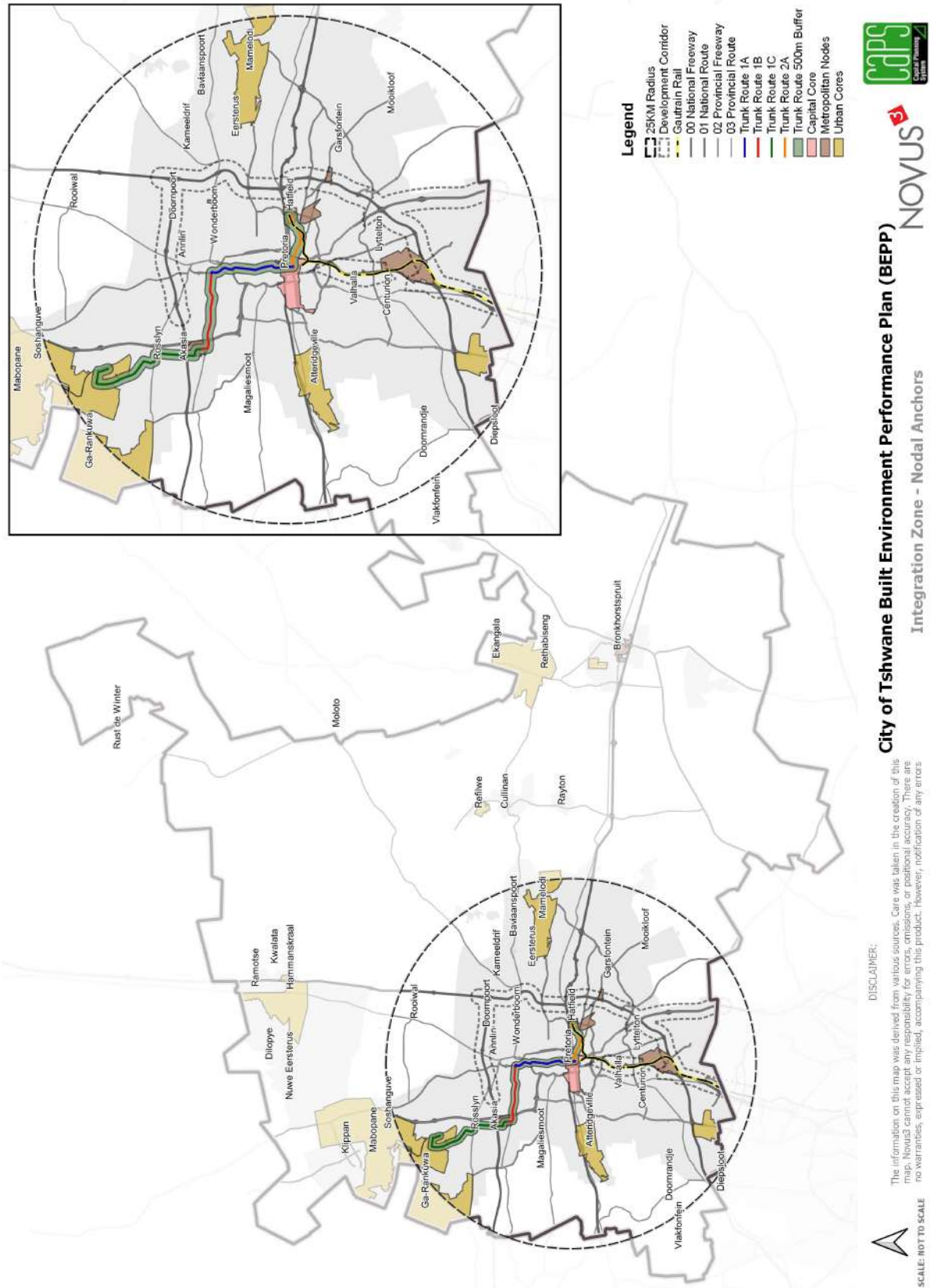


#### **8.4.3.3 Nodal anchors**

From the MSDF there are several nodal anchors within the City. With respect to the identified transit spine, the nodal anchors that comprise the transit spine, will be considered to help define the integration zone. These include:

- Capital Core (which comprise of the Pretoria Inner City);
- Metropolitan Nodes (Akasia and Hatfield), and;
- Urban Core Nodes (Ga-Rankuwa, and Soshanguve / Mabopane to the north).

Figure 24 Integration Zone – Nodal Anchors





#### **8.4.3.4 Feeder routes and accessibility**

From the identified transit spine, the operations plan, and the nodal anchors, the second last test to verify the Integration Zone, is to identify the feeder routes intersecting with the transit spine as well as the accessibility with respect to the transit spine. Accessibility will be defined by a 500m and 800m buffer zone, based on walkable permeable network analysis.

Figure 25 Integration Zone – Feeder routes & accessibility



#### **8.4.3.5 Integration Zone Precincts**

The final assessment of the Integration Zone is to define the “beads” (precincts) that are aligned to the “string” (transit spine). Considering the context and definition of an Integration Zone, as well as the spatial form driven by the City, the City has recognised the following precincts:

- Tshwane Automotive City (TAC) (Rosslyn) Precinct;
- Tshwane freight and Logistics Hub (Akasia) Precinct;
- BRT Line 2 Urban Design Framework;
- West Capital Precinct;
- Northern Gateway Precinct;
- Salvokop Precinct, and;
- Hatfield Precinct.

The Rosslyn Precinct extends over the boundaries defined by the previous mentioned parameters. Its impact on the spatial form of the City can justify the consideration to expedite the medium-term plans regarding IPTN expansion, due to potential housing expansion and industrial / commercial development in the precinct.

The Northern Gateway Precinct, West Capital Precinct and Salvokop Precinct forms part of the Tshwane Inner City Regeneration Strategy (TICRS) and is the most progresses three (3) precincts of the seven (7) key precincts within the Inner City. The TICRS aims to achieve amongst others the key outcomes as intended by the Integration Zone definition and can be further related to the housing and transport alignment of the City. The TICRS has been drafted and approved as the strategy to move all National Government departments into the City, specifically in the two Government Boulevards and Civic Precinct – creating areas of economic growth; and to significantly increase the housing densities in West Capital and the Nelson Mandela Development Corridor – creating areas of residency.

Figure 26 Conceptual Integration Zone – Transit Spine, Nodal Anchors and Precincts

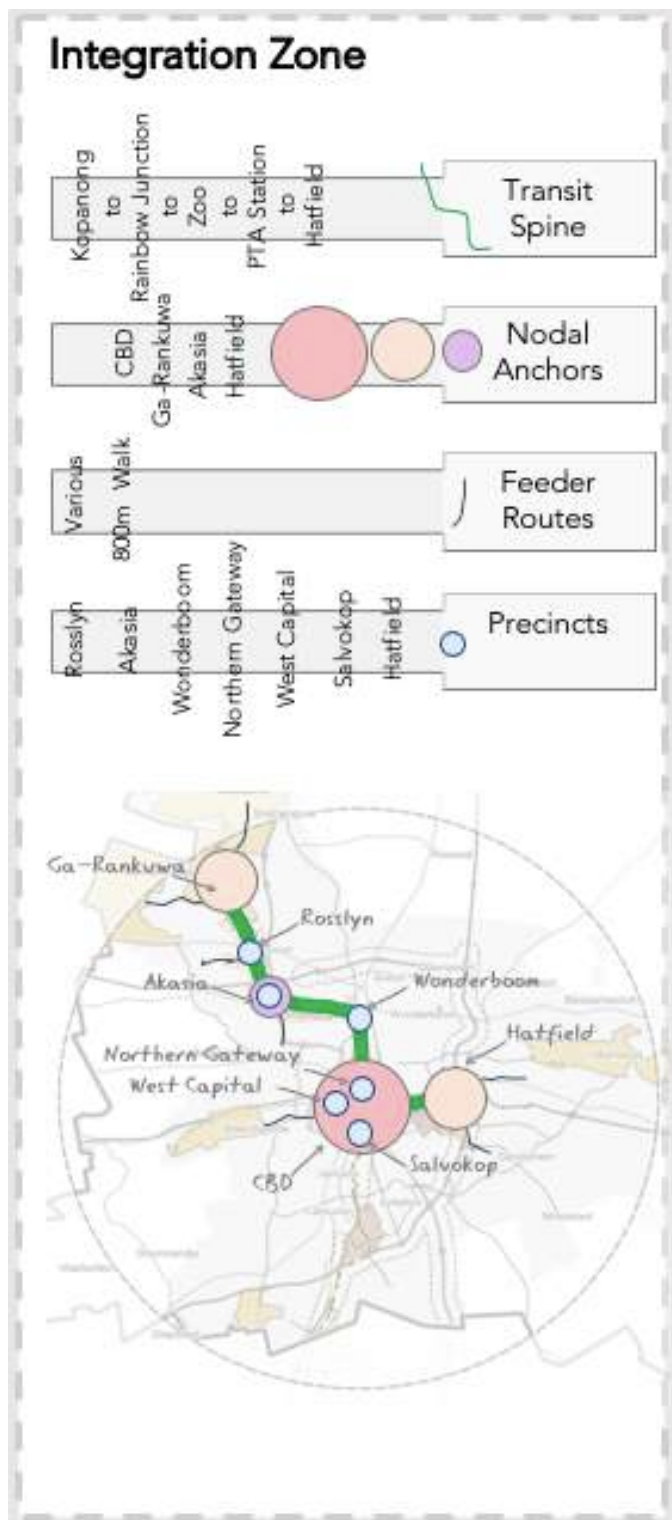
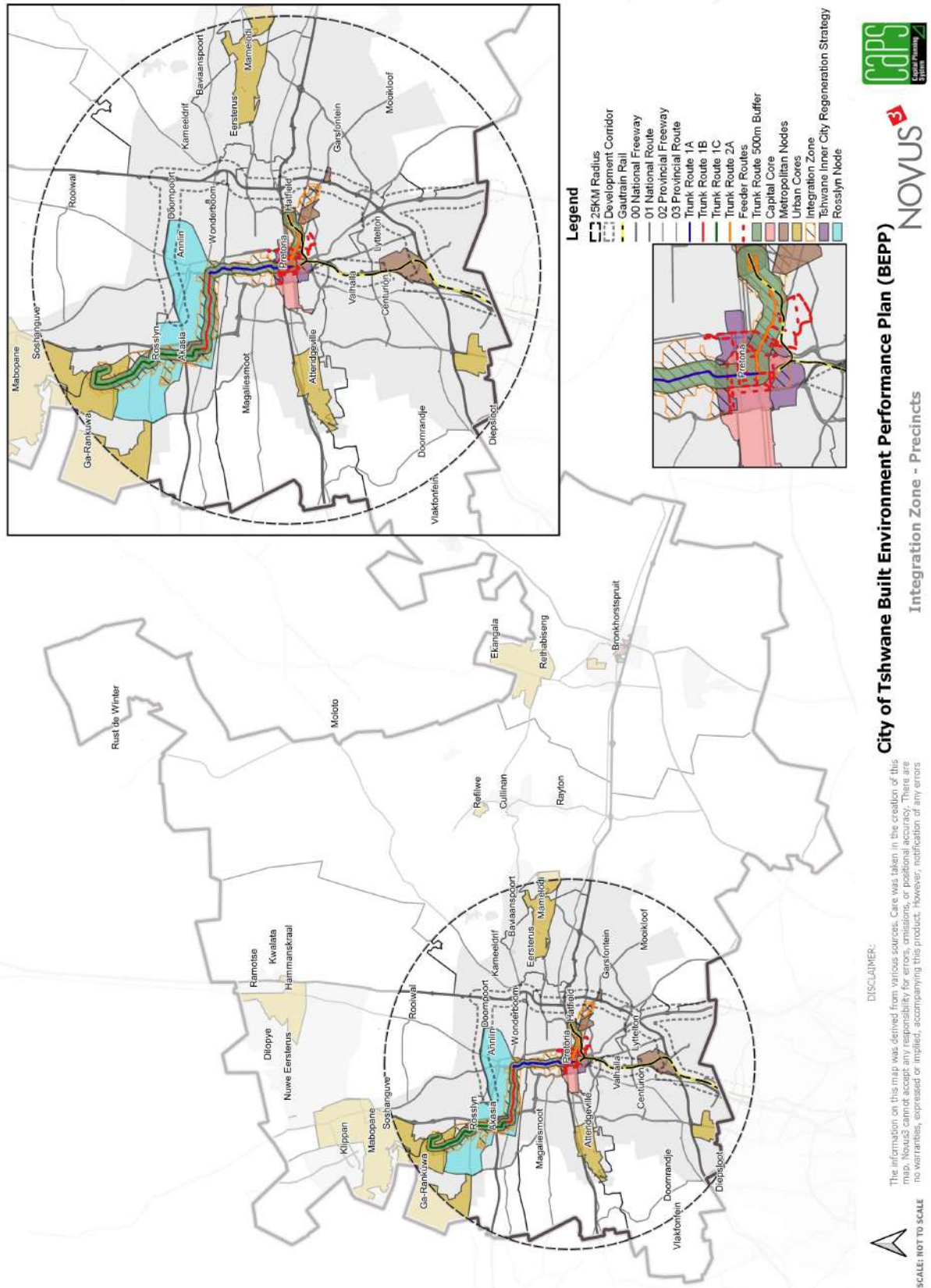


Figure 27 Detailed Integration Zone – Transit Spine, Nodal Anchors and Precincts





## 9 Human Settlement and Transport Planning Alignment

The alignment of human settlement (housing) and transport planning and investment initiatives within the City is not only of importance from a BEPP reporting perspective, but also from an socio-economic transformation, space utilisation and optimisation, and financial efficiency and sustainability perspective.

BEPP's are particularly focussed on the effective alignment between human settlement and transport planning and investment initiatives given the magnitude of national, provincial and municipal funds allocated to the two disciplines. Furthermore, housing and transport relate to the most elementary drivers of our economy, and if implemented correctly, will lead to economic growth, socio-economic upliftment, improvement in the space economy towards more productive cities etc.

It is therefore important to investigate and emphasise the alignment between housing and transport, as it is the premise that once the housing and transport arrangement in a city is efficient, several other efficiencies will be activated related to, but not limited to property value, public space utilisation, revenue collection on public transport systems, etc. which all in turn lead to more public funds – through successful revenue collection – and so better service delivery. The same efficiencies should aim to provide a myriad of housing options, which in turn will address the massive housing backlog in South Africa.

### 9.1 Alignment Rationale

Research by the Centre of Affordable Housing Finance in Africa (CAHF) demonstrates that South Africa's housing sector is not performing to expectations. The sector fails to deliver affordable housing options at the rate and scale needed and it does not provide accessible options close to employment opportunities.

While the government's focus is necessarily on the destitute, CAHF concludes that a wider segment of the population is unable to meet its housing need. The main challenge in the availability of affordable housing options aimed at the subsidy-eligible market, as well as the so-called gap market-households that earn between R3500 and R10 000 per month. 46,9% of total households earn less than R3500 per month. This cohort qualifies for RDP housing located on the periphery of the city and is dependent on taxi and bus transport.

There is a need for an active housing market at the bottom end of the housing sector. Otherwise put, a market that motivates the informal dweller to migrate to an RDP house; the RDP owner to move into the bonded houses; and the bonded owner to migrate to a higher value house. At present, the owners are locked into their current houses located on the periphery of the city. A major cause of the present scenario is insufficient supply to meet the demand located in close proximity to employment opportunities.

The major challenge to be resolved with regard to the City's urban structure, is to reduce the distance between home and work. With the apartheid laws being abandoned in the early 1990's and this all restrictions now non-existent, affordability determines housing and location decisions.

The department of Human Settlements' Strategic Plan 2015-2020 outlines measures for establishing viable and socially and economically integrated communities that are situated in areas that allow convenient access to economic opportunities.

Up to date, the City has focussed on informal settlement eradication as guided by the National Human Settlements Program. Key drivers of this program were based on where people are located, land



ownership, and property value. The latter being one of the most prohibitive forces of aligning housing with transport initiatives.

The prohibitive costs of strategically located land requires that government takes a more prudent approach to acquiring (and retaining) land for human settlements. Assessing the full extent of the City's assets in terms of land and buildings, coupled with under- utilised state-owned land and assets are a practical way of accruing such strategic land.

Land banking, within this context, is the practice of aggregating and/or setting aside parcels of land for future strategic use. The City is currently updating its Asset Register. As part of the process, all municipal-owned land and buildings that have potential to contribute towards sustainable human settlements and other strategic objectives of the City, should be flagged.

In 2019, Tshwane updated and approved a new land release strategy. The report recognises the on one hand, there are arguments put forward that public land must be preserved for future generations while on the other, the idea that municipalities should recognise the potential of the transfer of municipal property assets or the granting of lease rights with a view to inject much needed revenue and/or investment in targeted areas, is also gaining traction. It is therefore important that the City finds and manages the delicate balance between these two competing views and the process to be followed in implementing either of them.

## **9.2 Alignment Perspective**

Compaction and densification are two of the cities key focus areas when it comes to urban development in relation to housing and transport integration. The following section will therefore provide more insights into the compaction and densification processes within the City's Integration Zone, with specific reference to the alignment of investment initiatives of housing and transport.

### **9.2.1 Compaction**

Compaction, in the context of urban development and the MSDF, refers to intensification of land use which promotes relatively high residential density with mixed land uses and is based on an efficient public transport system which encourages walking, cycling as well as low energy consumption modes of transport. It also refers to the provision of large-scale opportunities for social interaction, which suggests the provision of social facilities and a public realm.

To evaluate the alignment between housing and transport, within the City's Integration Zone, the following indicators for compaction will be discussed:

- Modes of transport;
- Bid-rent model, and;
- Public realm.

#### **9.2.1.1 Modes of Transport**

Modes of transport refers to options for travelling. The more modes of transport accessible within an area, the less users are captive market participants, which implies a less constrained economy in the area. More modes of transport also allow for inter-modal transfer, which enables users of the area to move from place of residence to place of employment efficiently across a wide range of transport modes.

The IPTN Operational Plan of the City's BRT recognises the interaction between different modes of transport and incorporate and integrate the different modes of transport along the activity spines in the City. The higher the number of modes of transport, and the higher the finer the urban grain, the more potential passenger trips between places of residence and places of economic activity per hour are possible.

With respect to the different modes of transport within the Integration Zone, it is clear from the Operational Plan that the City is making provision for a variety of modes of transport, albeit public or private, vehicular or non-motorised.

Figure 28 Median station with bypass lane



Figure 29 Side Stop with dual carriage way



### 9.2.1.2 Bid-Rent Model

Based on the fundamental principles of the Bid-Rent model, the higher the ratio between density of land uses and distance to the city centre, the higher the prices. Different price elasticities exist per land use types, however the relationship between density, distance and the city centre remain the same; as dictated by market forces.

The ability to do business, find employment, access economic or commercial opportunities are directly correlated to the number of land-uses within a specific area. The potential for economic prosperity and growth is therefore expressed in terms of property value. The higher the rate paid per hectare, the more efficient the land utilisation will be. It is for this reason that property value is a good proxy for compaction identification.

The City has completed a land value audit in 2020 to better understand the land value trends within the City, and to give insights on which areas are most valuable. This study was not yet defined in terms of the integration zone and can therefore not be unpacked in this section.

### **9.2.1.3 Public Realm**

The public realm indicator of compaction relates to the number of public facilities and amenities within an area. The more facilities or amenities in close proximity to each other, the more compact that space becomes, which makes it even more attractive as a travel destination; and so increasing passenger trips per hour to that destination. This follows the logic purported by the bid-rent model.

### **9.2.2 Densification**

Densification in the context of urban development and the MSDF, refers to increasing residential density in a planned and meaningful way within the existing boundaries of specific areas to meet efficiencies in infrastructure, service and amenity provision. To evaluate the alignment between housing and transport, within the Integration Zone, the following elements for densification will be discussed:

- MSDF densities – desired densities;
- Current zoning densities – current potential densities;
- IPTN land use assessment – Development potential, and;
- Density determinants.

#### **9.2.2.1 MSDF Densities – Desired densities**

The MSDF serves as the spatial strategy for the City. It provides the guideline of the density targets to be achieved within the integration zone. The MSDF sets the following density targets along the integration zone:

- 0m to 500m walking distance from the Transit Spine: 200 dwelling units per hectare
- 501m to 800m walking distance from the Transit Spine: 120 dwelling units per hectare
- Adjacent to feeder routes: 80 dwelling units per hectare

From the city's perspective, it would be ideal to increase the densities of residential use, that are closest to the activity or transit spine. This correlates with the bid-rent model theory, whereby it is more efficient to occupy land closest to the services that lends itself to provide the ability to travel, i.e. reach areas of economic potential. The city understands the benefit of densifying development, and specifically residential development within a walking distance to the IPTN in the integration zone.

The tapering down of densities imply a reciprocal tapering down in the level of service provided in terms of public transport along the integration zones. A density of 80 dwelling units per hectare represent a lower number of passengers per trip per vehicle, which imply to optimise the service

offered a lower level of frequency between the feeder pick-up points and the integration zone itself should be implemented.

A density of 200 dwelling units per hectare, represents a higher passenger per trip per vehicle, which implies the affordability to operate at higher frequencies, which in turn implies higher potential to access opportunities. Therefore, the higher the density in the integration zone closest to the activity spine, the higher the possibility to access jobs, the higher the potential for other land uses to attempt to occupy the same space. This in turn increase land value, which makes it more difficult for public sector to occupy the space required for spatial restructuring.

From a housing provision perspective, much of the area within the Integration Zone is already developed, therefore it is difficult to compete for development space with the private sector in a competitive brownfields development area. Given the potential along a public transport route, this competition is even more pronounced than other areas of the City. The City is therefore required to provide more corrective and framework related measures, that result in inclusionary housing, housing typology management and land release strategies that will enable the City to compete efficiently for housing development within the Integration Zone.

The fine balance between density, property value, and infrastructure provision calls for dedicated guidance from the City, and is provided in the MSDF, RSDF and Town Planning Scheme from a regulation point of view. The next step is to develop an incentive strategy through the newly established policy development division within the department of human settlements.

#### **9.2.2.2 Current zoning densities – current potential densities**

Zoning is the process of dividing land in a municipality into zones in which certain land uses are permitted or prohibited. In addition, the size, bulk and placement of buildings are regulated in order to manage amongst others, the infrastructure burden on the limited resources of the municipality. Zoning implies services that are already available. It also implies building controls applicable to each erf. Building controls are one the instrument the City can use to ensure the desired urban form, and density are achieved.

When evaluating the alignment between housing and transport, the expectation is that the zoning along the activity or transit spine, and within the Integration Zone, are of such a nature that it firstly corresponds to the MSDF, and secondly indicate what the municipality want to achieve with a piece of land. The difference between the desired densities and the actual land use, indicates the following:

- The ability to develop in greenfields areas;
- The ability to develop in brownfields areas;
- The potential upgrading, and so, occupancy potential increase;
- The potential services that needs to be provided should development occur, and;
- The market's certainty and alignment with what the municipality attempt to achieve.



**BRT LINE 1.1 - LAND USE**

This map illustrates the land use designations for BRT Line 1.1. The map is color-coded to show different types of land use, including residential, commercial, industrial, and recreational areas. Key features include the BRT Line 1.1 route, station points, and a 500m station buffer. The map also shows various landmarks, roads, and water bodies.

**Legend:**

- 1 Residential 1
- 2 Residential 2
- 3 Residential 3
- 4 Residential 4
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**BRT LINE 1.2 - LAND USE**

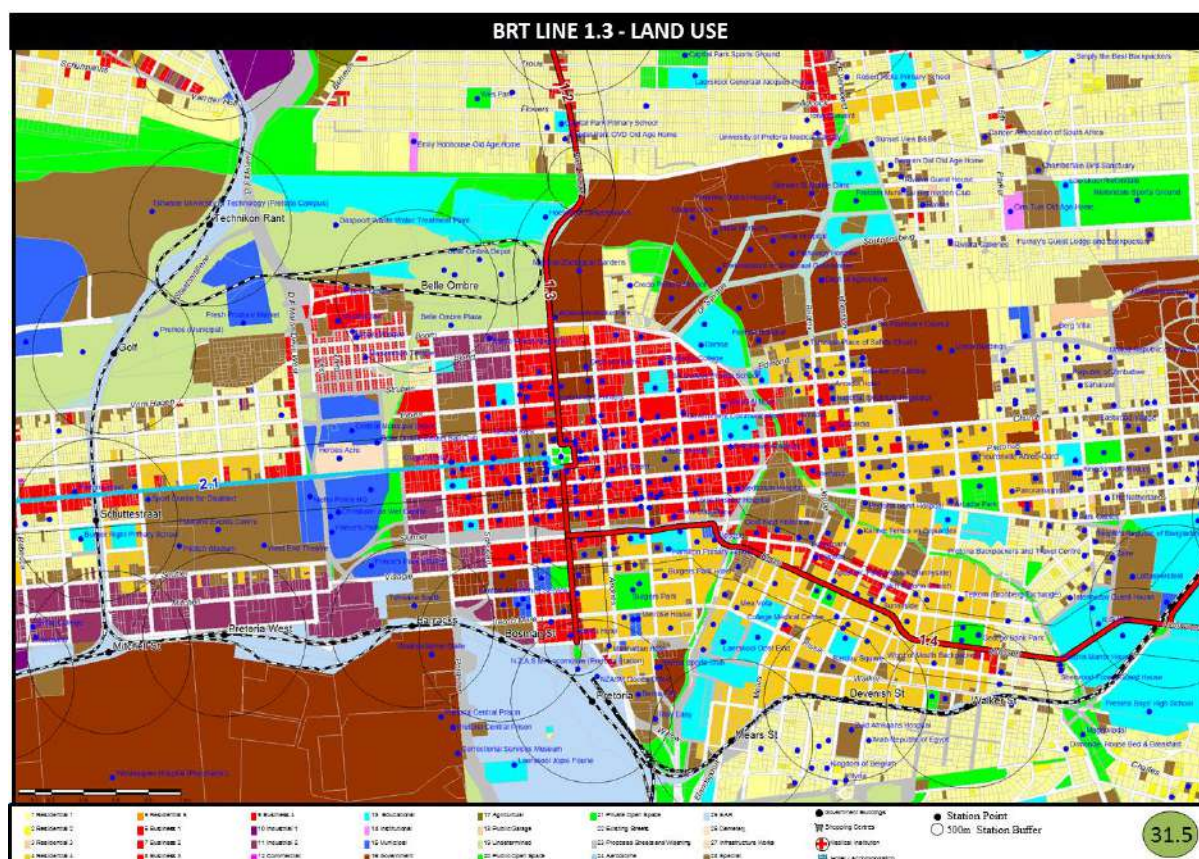
The map displays the BRT Line 1.2 corridor, which runs from the city center towards the northern suburbs. The corridor is highlighted in red, indicating the proposed BRT route. The map is color-coded to show different land use zones, including residential, commercial, industrial, and open space. The legend at the bottom left identifies the color-coded zones, and the scale bar at the bottom right indicates the station point and 500m buffer.

**Legend:**

- 1 Residential 1
- 2 Residential 2
- 3 Residential 3
- 4 Residential 4
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Figure 32 Integration Zone: Potential land use (Part 3)



Currently, the land use proportion of the integration zone (line 1) are as follow:

Table 10 land use proportion of the integration zone

NON-RESIDENTIAL						RESIDENTIAL				TOTAL
IRPTN NETWORK	Business - Greenfields	Industrial - Greenfields	Mixed Use - Greenfields	Mixed Use - Redevelopment	TOTAL	Greenfields	Redevelopment	Densification	TOTAL	
	ha	ha	ha	ha		ha	ha	ha	ha	
Rail	67	156	72	57	352	749	818	48	1615	1967
Line 1	18	12	7	1	38	330	267	159	757	795
Line 2	0	14	0	0	14	35	11	19	64	78
Line 3	4	6	0	10	19	104	109	0	214	233
Line 4 Original	7	88	11	26	132	211	108	171	491	622
Line 4 Alternative	7	103	11	26	146	161	189	425	774	921
Links	0	0	0	0	0	1	1	105	106	106
TOTAL Original	95	275	90	94	555	1430	1313	502	3246	3801
TOTAL Alternative	95	290	90	94	570	1380	1394	755	3530	4099
%	17%	50%	16%	17%	100%	44%	40%	15%	100%	
%					15%				85%	100%

Quantum related to the integration zone are part of Line 1. Yield related to the integration Zone, Transit Spine, can be summarised as Rainbow Junction / Zoo, Zoo/PTA Station, and a part of Paul Kruger to Menlyn. This approximates 15% of the total line 1's developable land, which translates into 2,7ha Business Greenfields, 1,8ha Industrial Greenfields, 1ha Mixed Used Greenfields, and 0,15ha Mixed Use redevelopment.



### 9.2.2.3 IPTN land use assessment – Development Potential

Based on the IPTN operations plan, the estimated potential development yield in the Integration Zone is shown in Table 11 below.

Table 11 IPTN Land use assessment – Development Potential

LINE 1: LAND IDENTIFIED FOR DEVELOPMENT ALONG THE ROUTE (200 m on both sides)												
Line 1: Sections	Developable Area	Residential Area	Residential Area			TOTAL	Residential Units			TOTAL		Density
			High Income	Middle Income	Low Income		High Income	Middle Income	Low Income			
	ha	ha	%	%	%	%					%	du/ha
1.1 Kopanong -Rainbow Junction	434	363	10%	10%	80%	100%	2 902	2 902	23 216	29 020	54%	80
1.2 Rainbow Junction-Zoo	55	55	10%	33%	57%	100%	436	1 449	2 475	4 360	8%	80
1.3 Zoo-Pta Station	5	5	20%	50%	30%	100%	82	204	122	408	1%	80
1.4 Paul Kruger-Menlyn	103	103	60%	30%	10%	100%	4 934	2 467	822	8 224	15%	80
1.5 Menlyn-Mahube Valley	161	144	40%	22%	39%	100%	4 556	2 512	4 431	11 499	21%	80
TOTAL	757	669	24%	18%	58%	100%	12 910	9 534	31 067	53 511	100%	80

The results for Line 1 (sections 1.1 to 1.5) are summarised. The total residential yield along Line 1 is estimated at approximately 53 511 units. This translates to approximately 31 067 low income units, 9 534 units earmarked for middle income, and approximately 12 910 units for the high-income group.

Yield related to the Integration Zone, Transit Spine, can be summarised as Rainbow Junction / Zoo, Zoo/PTA Station, and a part of Paul Kruger to Menlyn. This approximates 38% of the expected yield, resulting in 20 344 units.

In terms of individual sections, it is evident that section 1.1 from Kopanong to Rainbow Junction provides the highest yield with approximately 29 020 units (of which the vast majority (more than 80%) is earmarked for the low-income group).

Figure 33 IPTN Land use assessment – Development Potential (part 1)

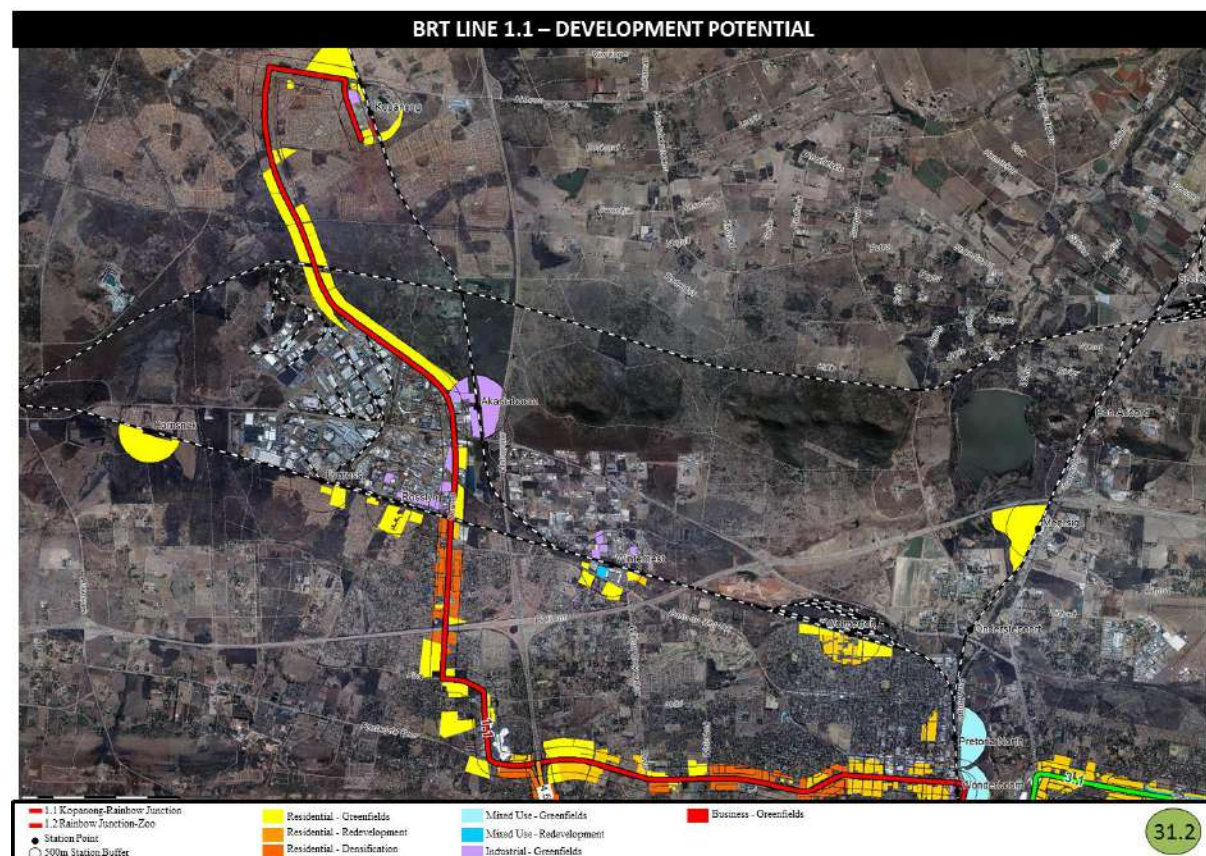




Figure 34 IPTN Land use assessment – Development Potential (part 2)

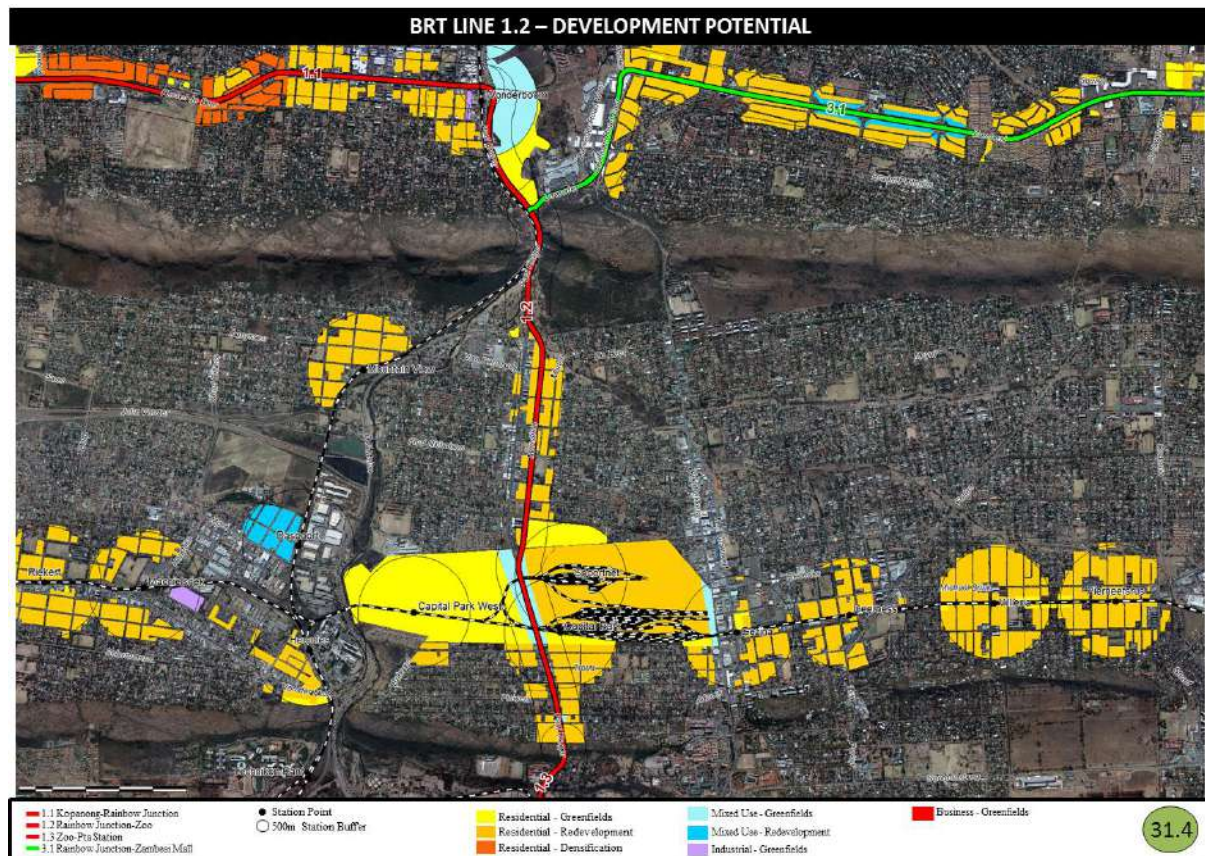


Figure 35 IPTN Land use assessment – Development Potential (part 3)

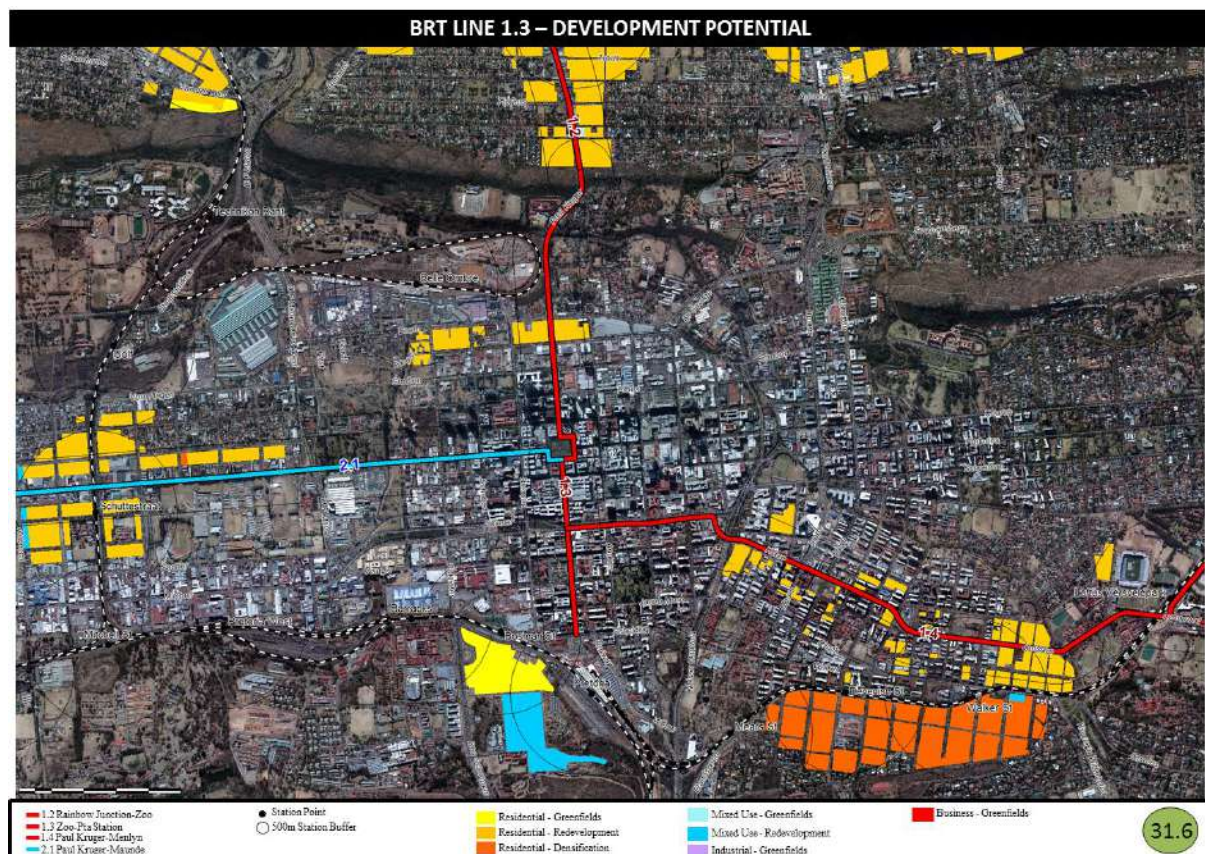
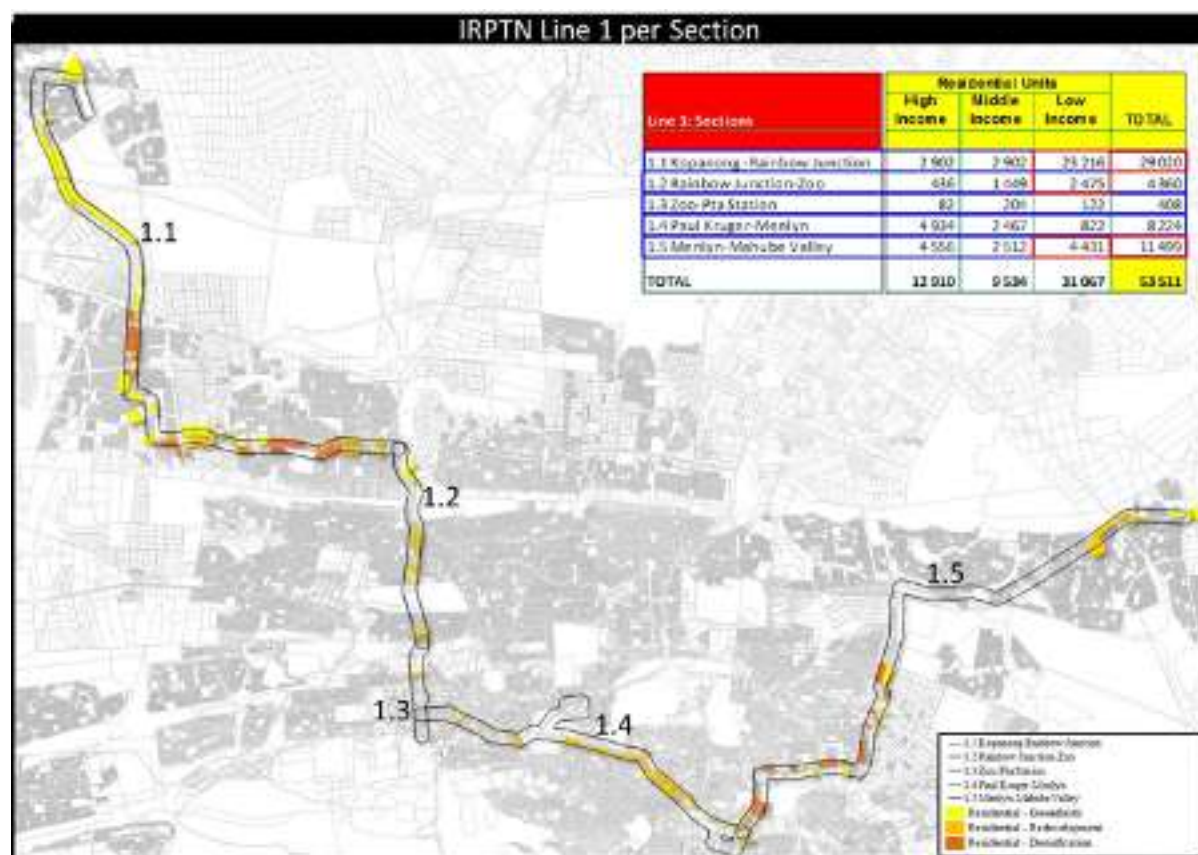




Figure 36 IPTN Land use assessment – Development Potential



## 10 Climate Change Risk and Impact Assessment

Climate change and consequent global warming has adverse impacts on a region's climate system which could lead to a number of potential catastrophic events including flooding, drought, air pollution, heat stress and water scarcity. Urbanised cities together with densely populated areas are areas of high risk due to the impact that these events could have on the built environment such as roads, water networks, human settlements and social infrastructure.

Given that the city is characterised by continued urban growth and consequent population pressures, measures of climate responsiveness and resilience should form part of the city's strategies to achieve a sustainable and compact city structure. The following section has been structured into three (3) parts:

- The first section outlines the results of the vulnerability assessment in line with the adaptation programme within the City Sustainability Unit (CSU),
- The second section discusses the City of Tshwane energy futures report in line with the mitigation programme within the CSU,
- The third section outlines the ten (10) key interventions identified by the city to build a climate resilient and resource efficient city.

## 10.1 Climate Risk and Vulnerability Assessment (Adaptation)

Adaptation is wide-ranging and the current approach is mainly advocacy-based, ensuring that different role-players are aware of and responding to the city's climate hazards and risks as identified in the city's Climate Risk and Vulnerability study<sup>2</sup>.

The most notable indicator is rising temperatures. In the Tshwane region these have been increasing significant over recent decades – at about twice the global rate. Although there are as yet no significant changes in rainfall, there is a downward trend in the maximum number of consecutive wet days per year.

How these climate patterns will develop in the future is described by the outputs of computer-based models in line with the global climate system called Global Circulation Models (GCMs). The models are used to predict how regional climate systems will respond to changes in the troposphere resulting from an intensified greenhouse effect. A 60km<sup>2</sup> resolution downscaling of six different GCMs is used for the purposes of understanding how the climate of the Tshwane region will develop up to the year 2100. Each of the models are run under the assumption that coordinated global efforts at mitigating carbon emissions will remain limited and that CO<sub>2</sub> concentrations double (as compared to pre-industrial values) by about the mid-21st century – also known as the A2 scenario of the Intergovernmental Panel on Climate Change (IPCC) Special Report on Emission Scenarios (SRES) .

The model outputs confirm that temperatures will continue to climb, with a rise of up to 2°C for the near-future period (2015-2035), between 1 and 3°C For the mid-future period (2040-2060), and 4 to 7°C projected over the region for the period 2080-2100. Rainfall anomalies exhibit a clear pattern of drying, which strengthens over time, although the scale of drying will be limited.

Extreme weather also becomes a concern. The climate model shows a drastic increase in the number of very hot days (days with maximum temperatures exceeding 35°C) in the second half of this century. Whereas the current annual average is 40 very hot days per year, the annual number of very hot days will range between 100 and 180 days by 2100. This implies that it is plausible for almost all days during the summer half-year to have maximum temperatures exceeding the 35°C threshold.

Extreme rainfall events (>20 mm of rain falling within 24 hours over an area of 50km<sup>2</sup>) are of less concern, although the climate models point towards an increased frequency of extreme events in future. These events typically exceed the capacity of infrastructure to deal with the runoff, leading to flash floods or general flooding of low-lying areas. Three prominent themes emerging from the assessment is the correlation between poverty, social vulnerability and climate impacts, as well as disaster preparedness and the role of natural buffers in building city resilience. These then find similar focus in programmes driven particularly by the CSU.

### 10.1.1 Social Vulnerability Assessment

The impacts of climate change are more notable within urban poor populations, in particular extreme weather events. The vulnerability of the urban poor stems from the lack of crucial infrastructure and basic services, together with poor quality housing. It is therefore essential for the city to identify and map high areas of vulnerability, in order to focus adaptation strategies towards the most vulnerable

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<sup>2</sup> Completed in September 2015.

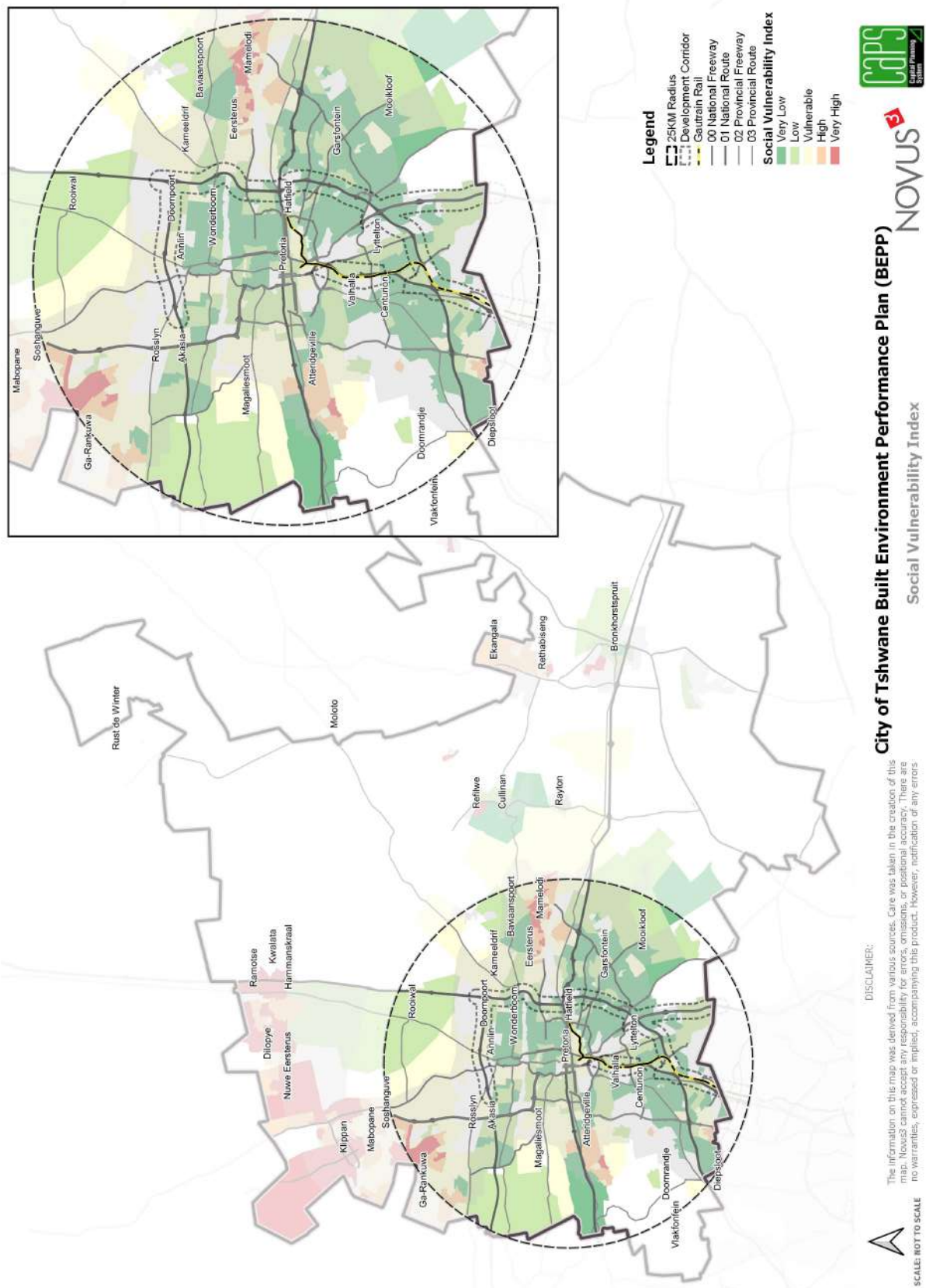
within the City. The social vulnerability index aims to identify and map high areas of vulnerability and has been calculated based on a number of socio-economic variables.

Figure 37 below indicates the results of the vulnerability assessment<sup>3</sup>. Region 1 together with Region 2 contains the highest social vulnerability to climate change impacts. Both regions are characteristic of highly populated areas located within informal settlements and aligns to the results of the deprivation index, prepared as input to the CPM. The deprivation index outlined underserved township areas including Atteridgeville, Temba, Mamelodi, Mabopane and Soshanguve as the most deprived areas which have the lowest levels of access to basic services.

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<sup>3</sup> Areas that have been indicated as “blank” areas have very low population densities and/or fewer households.

Figure 37 Social vulnerability index





The socio-economic indices used to calculate the vulnerability index were based on national census data, which has been spatially linked to Census 2011 sub-place boundaries. Table 12 below outlines the socio-economic indices used as input variables to the vulnerability assessment together with the region containing the highest comparative score.

Table 12 Socio-economic variables included within the vulnerability assessment

Attribute	Region with highest comparative score	Regions						
		1	2	3	4	5	6	7
Type of housing (shacks)	5							
Education (older than 25 years, no education)	7							
Employment: unemployed	1							
Household density (> 4 people/room)	1,5,6							
Poverty line (hh earning < R400/month)	1							
Economic dependency (young and old compared to economic active population)	3							
Physiological dependency (young and old)	2							
Air pollution (fuel use other than electricity)	5							
Access to water (no piped water)	2							
Single parents (female-headed households)	1							
Child-headed households	7							
Access to transport (no car)	1							
Access to information (neither radio or cell phone)	1,2,5,7							
In need of assistance (determined by problems with hearing, mobility, seeing, self-care, speaking)	1							
Social cohesion (non-South Africans in informal areas for < 2 years).	1							
Nutrition (malnutrition of children < 5 years old)	1							
Population density	1							
<b>Total Score</b>								

Vulnerability classification								
	Low vulnerability				High vulnerability			

Based on the table above, Region 1 remains the most vulnerable area due to factors associated with unemployment, poverty, poor access to public transport, high dependency ratios and high population density.

### 10.1.2 Priority risk factors and adaptation options

Together with the social vulnerability indicated above, the climate risk and vulnerability assessment identify four (4) major types of weather events affecting the city together with seven (7) key sectors at risk.

### 10.1.3 Extreme weather events

The four major weather events which affect the city includes floods, drought, heat waves and hailstorms. The impact of these weather events fluctuates based on the social vulnerability indicated above together with the severity of each event. Table 13 below indicates the impact of each weather event, together with contributing factors and the areas or regions which are most affected.

Table 13 Extreme weather events and affected areas

Weather event	Description	Areas most affected
Floods	<p>Flooding occurs within low-lying areas around the City, with a larger impact on densely populated informal settlements located within floodplains. Contributing factors:</p> <ul style="list-style-type: none"> <li>▪ Ageing infrastructure;</li> <li>▪ Inadequate storm water drainage systems;</li> <li>▪ Geographical location of human settlements, and;</li> <li>▪ Poor and vulnerable communities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Region 1 – Soshanguve, Hammanskraal, Ga-Rankuwa and Mabopane</li> <li>▪ Region 2 - Annlin and Sinoville</li> <li>▪ Region 3 – Atteridgeville</li> <li>▪ Region 4 – Centurion</li> <li>▪ Region 6 - Mamelodi and Moretele</li> </ul>
Droughts	Droughts mainly affect the agricultural sector.	<ul style="list-style-type: none"> <li>▪ Region 1 - Soshanguve, Winterveld</li> <li>▪ Region 3 – Atteridgeville</li> <li>▪ Region 6 - Moretele Park</li> </ul>
Heat Waves	Heatwaves are described as pro-longed periods of excessive heat which can be detrimental to human and animal health. In addition to health concerns, heatwaves also affect the agricultural sector.	<p>The occurrence of heatwaves cannot be specifically attributed to areas or regional boundaries. Populations groups more susceptible to heatwaves include:</p> <ul style="list-style-type: none"> <li>▪ Children;</li> <li>▪ People with respiratory diseases;</li> <li>▪ Elderly people and people with disabilities, and;</li> <li>▪ People with diseases such as epilepsy.</li> </ul>
Hailstorms	Hailstorms are the result of convective summer climates which lead to thunderstorms. Damage which stems from hailstorms include automobiles, aircrafts, skylights, glass-roofed structures, livestock and crops, and sometimes human fatalities.	Areas surrounding the Magaliesberg mountain range

#### 10.1.4 Key sectors at risk

The following key sectors have been identified as most vulnerable to the impacts of climate change.

Table 14 Key sectors at risk

Key Sector at Risk	Description	Impacts
Biodiversity	<p>Natural ecosystems are at risk due to land-use changes which results in land degradation and the introduction of alien plant species.</p> <p>Contributing factors:</p> <ul style="list-style-type: none"> <li>▪ Temperature increase;</li> <li>▪ Rising levels of atmospheric CO<sub>2</sub>, and;</li> <li>▪ Changing rainfall patterns.</li> </ul>	<p>The City consists of two (2) biomes namely grassland and savannah which contain ecosystems under threat. The grassland biome is highly-vulnerable to land-use and climate change and has been ranked as the second-most vulnerable. The Department of Environmental affairs have projected substantial change and loss of habitat for the grassland biome (DEA, 2013a; Driver et al., 2011). Loss of the grassland biome will impact the following:</p> <ul style="list-style-type: none"> <li>▪ Goods and services including water resources from highland catchments used for agricultural activity, and;</li> <li>▪ Conservation and ecosystem processes such as wildfires.</li> </ul>
Water Resources	<p>The city contains a number of water sources in the form of dams, rivers, wetlands and groundwater. Continued population growth together with the increase of economic development and higher standards of living will ultimately provide increased pressures on the current water resources available to the city. Climate Change adds to these pressures due to the impact it has on rainfall variability, weather events and increased surface water loss due to warming temperatures.</p>	<p>Impacts of reduced water resources include:</p> <ul style="list-style-type: none"> <li>▪ Water availability for functioning processes;</li> <li>▪ Water quality;</li> <li>▪ Changes in rainfall intensity;</li> <li>▪ Human and animal health;</li> <li>▪ Aquatic systems;</li> <li>▪ Functioning of existing infrastructure like that of wastewater treatment plants and storm-water networks;</li> <li>▪ Drought;</li> <li>▪ Economic sector impacts (agriculture, power generation, industrial processes), and;</li> <li>▪ Food security.</li> </ul>
Agriculture	<p>Agricultural areas are mostly located within the eastern parts of the city which contain mostly extensive chicken farming, cattle farming and dryland and irrigated cultivation.</p>	<p>Impacts of climate change include:</p> <ul style="list-style-type: none"> <li>▪ Food security;</li> <li>▪ Economic development;</li> <li>▪ Maize crop yield;</li> <li>▪ Livestock mortality rates, and;</li> <li>▪ Higher frequency in veld fires which increases the risk of damage to grain and cattle farms.</li> </ul>
Health	<p>Increase in the depth and intensity of high-pressure systems during winter is associated detrimental effects on air pollutants and the production of near-surface ozone.</p>	<p>Increased temperatures directly affects heat-induced stress for humans and animals, giving cause to health related concerns.</p>

Key Sector at Risk	Description	Impacts
Urban Planning	Key driver for adaptation strategies through spatial planning. Focus areas include informal settlements and densely populated areas built within the flood line. The risk profile for types of housing and density of settlements encouraged through urban planning strategies determines the risk profile of certain areas.	<p>Due to the lack of basic infrastructure and services, informal settlements are at greater risk during the occurrence of climate change events.</p> <p>The city has 150 informal settlements containing dense populations of which the majority are located within Region 1, Region 3 and Region 6.</p>
Energy	The bulk of electricity generation within the city is generated by coal power plants in surrounding areas.	The city is vulnerable to the impacts of climate change in the form of weather events like that of lightning, increased occurrence of heatwaves and veld fires which damage power transmission lines. Due to increased temperatures, energy demand is likely to increase during summer and decrease during winter.
Infrastructure and Transport	Damage to infrastructure stems from flash floods as a result of slow-moving thunderstorms associated with lightning, damaging winds and hail.	The main climate risk within the city includes that of flash floods which damages existing infrastructure.

### 10.1.5 Priority risk factors

In conclusion to the city's Climate Risk and Vulnerability study, a number of priority risk factors were identified. These risk factors originated as a result of the social vulnerability assessment together with the risks identified in terms of extreme weather events and impacts on key sectors. The eight (8) priority risk factors identified include the following:

- Risk factor 1: Loss of ecosystem goods and services
- Risk factor 2: Increased energy demand
- Risk factor 3: Increase in diseases affecting human and animal health
- Risk factor 4: Damage to infrastructure (i.e. stormwater systems, roads, bridges)
- Risk factor 5: Water insecurity
- Risk factor 6: Flooding and damage to human settlements and private property
- Risk factor 7: Increase in sinkholes
- Risk factor 8: Decreased productivity of agro-ecosystems affecting food security

Together with each risk factor, the Climate Risk and Vulnerability study outlines possible adaptation measures together with regions of focus (targeted regions), refer to "City of Tshwane Climate Risk & Vulnerability Assessment (abridged version)" for details pertaining to the suggested adaptation measures.

## 10.2 Greenhouse Gas Emissions Inventory (Mitigation)

The key driver behind the Mitigation Programme is the Greenhouse Gas Emissions Inventory (GHGEI). The GHGEI for 2014/15 financial year complies with the Global Protocol for Community-Scale (GPC) Greenhouse Gas Emissions Inventories and this has been independently verified. For more detail pertaining to the Climate Resilience and Responsiveness Greenhouse Gas Emissions Inventory (GHGEI) refer to Addendum 3 of this document. It reveals that the city is emitting 21 million tonnes of carbon dioxide equivalent (21mtCO<sub>2</sub>e) per annum, which is equivalent to 7 tCO<sub>2</sub>e per capita. The three broad areas of emissions are energy (59%), transport (21%) and waste (20%) and these inform the response in terms of the Mitigation Programme.

Energy emissions are related to the manner in which the city powers buildings and various industries. Energy is primarily sourced from the national utility (Eskom) which has built up a national network of coal-fired power stations and has been slow to embrace sustainable alternatives.

Waste emissions are due to the manner in which the city manages waste, primarily landfilling which includes organic waste. This is one area that the CSU has identified as being directly within the city's control, thus having the ability to adopt more modern and environmentally sensitive waste management practices that will reduce emissions.

The third source of emissions is from the transport sector which is primarily affected by the city's spatial legacy. The spatial legacy has been based on principles of separated development and a lack of comprehensive networks which provide safe and reliable public transport modes. The city has a direct influence within the transport sector and has identified long-term intervention. Long-term intervention of the city's transport sector includes increased investment into public transport, amongst others the TRT system.

Table 15 below indicates a high-level overview of the mitigation focus within the CSU and characterises the intervention requirements as per the energy, waste management and transport sectors.

Table 15 Mitigation interventions

Low Carbon Energy Future	Sustainable Waste Management	Clean Mobility
Promoting energy efficiency: Green Building By-law which reinforces passive design features.	Promote separation at-source: all households and businesses separate recyclable waste from non-recyclable waste to enhance levels of recycling	Spatial planning to yield compact and dense cities (MSDF, RSDFs, Precinct Plans)
Self-generation: a focus on self-generation under 1 MW facilitated by the Embedded Generation Policy and Guidelines	Divert waste from landfill: cost neutral green economy projects to enable the private sector to put recycling infrastructure in place	Sustainable Public Transport: Bus Rapid Transit system inclusive of CNG buses in support of the C40 Clean Bus Declaration
Waste-to-energy: Cost neutral green economy projects targeting our waste water treatment works and residual waste (municipal solid waste)	Waste-to-energy: production of energy from the processing of residual waste and Waste Water Treatment Works	Innovative & modernising service delivery: CNG buses with WIFI, electric vehicles for messenger fleet, solar charging stations.
	(Formalisation of informal waste-pickers and protect their human rights)	Promoting non-motorised transport: The annual Green Ride, Kasi Rides and 2018 Car-Free day and advocating for NMT infrastructure to accompany road



Low Carbon Energy Future	Sustainable Waste Management	Clean Mobility
		infrastructure development and upgrades; Tshwane Bike-Share Pilot at UP

### 10.2.1 Climate response strategy – Ten (10) key interventions

The city's Climate Response Strategy (CRS) was released as a final draft document during 2018, with the aim of establishing the current climate change context within the city together with the identification of ten (10) key intervention programmes focussed at building a climate resilient and resource efficient city. It should be noted that this document is regarded as a precursor to the City of Tshwane's CAP, which will be developed under the C40 Cities Programme<sup>4</sup>, and to be submitted at Council for approval by March 2021.

The ten (10) key intervention programmes identified within the CRS has been outlined below and was established based on a strategic review of current climate assessments together with stakeholder engagements. Each intervention includes a short description, for details pertaining to each intervention refer to the "The City of Tshwane - Climate Response Strategy (2018)".

- **Intervention 1: Enhance and protect the city's natural ability to buffer climate change impacts.** The city has an abundance of natural resources which provide invaluable eco-services such as heat mitigation, flood attenuation and enhanced water quality. These are under threat partly due to development patterns in the city. The city is striving to put protective measures in place for 31 priority wetlands by 2021 according to its Wetlands Management Plan (WMP). The city's land use planning and natural resource management will be closely guided by the bioregional plan which identifies biodiversity priority areas.
- **Intervention 2: Develop an integrated approach to water management in the city.** Water scarcity has been anticipated within the Climate Risk and Vulnerability Study. The city is dependent on bulk water supplied by Rand Water, a quarter of which is lost through ageing infrastructure. The city is aiming to develop an integrated and holistic approach to water management, diversifying the water mix and exploring the re-use of groundwater, stormwater and rainwater. A Water Demand Management Programme inclusive of leaks management will be intensified with penalties for non-compliance.
- **Intervention 3: Build climate resilient communities.** The nexus between exposure and vulnerability to climate risks and social vulnerability is self-evident. The urban poor bears the brunt of climate impacts and have low levels of resilience. Urban populations with access to resources indicate an increase in water and electricity consumption to cope with climate impacts. Disaster management is yet to fully and explicitly address climate change. The city is ensuring that a set of interventions address poverty, exposure to climate hazards, status of informal and high-risk dwellings together with general health and wellbeing. Initially, resources will be focused on refining knowledge and an understanding of climate impacts together with multi-disciplinary and stakeholders' forums which will

<sup>4</sup> City of Tshwane was accepted as the 70th member of the C40 Cities Climate Leadership Group (C40) in September 2014. C40 is currently rolling out the African leg of its Global Climate Action Planning Programme. Launched in May 2018, the programme currently provides comprehensive technical support to 11 cities on the continent, including the City of Tshwane, to develop ambitious and equitable Climate Action Plans in line with the objectives of the 2015 Paris Agreement.

focus on building urban resilience. Disaster management will prioritise disaster risk reduction measures.

- **Intervention 4: Promote mixed-use densification and transit-oriented development.** The city's historic spatial form is characteristic of urban sprawl, which resulted in high population densities on the periphery resulting in unreasonably long, and costly, commuter distances. The unsustainable nature of historic spatial planning is the cause of more than four (4) million tonnes of carbon dioxide equivalent yielded annually within the transportation sector. Modern and efficient modes of transport such as the TRT system and strategies to densify and diversify urban nodes are central to overcoming these spatial inefficiencies. Transit Oriented Development (TOD) will integrate spatial planning, building design and transport infrastructure.
- **Intervention 5: Promote cleaner mobility.** Current trends indicate that motorised transport will remain the main mode of transport within the city. However, mass transit and cleaner modes of transport have been introduced with the aim of reducing transport-related emissions. The following has been implemented within the city:
  - The TRT system has forty CNG-propelled buses which will be fuelled from landfill gas;
  - The corporate fleet of the city has introduced ten (10) electric vehicles together with solar-powered Electric Vehicle (EV) charging stations;
  - Infrastructure for electric vehicles will be rolled out in the city through partnerships with the private sector and the South African National Energy Development Institute (SANEDI), and;
  - Non-motorised transport (NMT) will become an increasingly viable mode of transport.
- **Intervention 6: Retrofit existing buildings and build green buildings.** Buildings have been classified as a source of high resource consumption during the process of construction and maintenance. This has prompted the city to endorse a Green Building Policy and By-law. The city is a member of both the Green Building Council of South Africa's (GBCSA) Green Building Leadership Network (GBLN) and the World Resources Institute's BEA Programme. Through the BEA programme, the city is in the process of retrofitting the HB Phillips building located within the inner city as part of a general upgrade. This project aims to illustrate that older buildings can operate optimally through retrofitting and green building initiatives. Tshwane House, home to the municipal headquarters, is a 5-star rated green building.
- **Intervention 7: Promote energy efficiency.** The city's main sources of energy stem from carbon heavy resources. However, before the city can focus interventions towards the source of energy, reduction in energy consumption should be achieved. To achieve this the city has opted to introduce the following:
  - Energy efficiency measures which include energy-saving lightbulbs within municipal buildings and streetlights;
  - Installation of solar water heaters in low-income housing;

- Assessing the efficiency of operations such as the wastewater treatment works, and;
- Exploring ways of enhancing the thermal efficiency of poor designed and constructed homes through simple but effective interventions such as the application of cool coatings.
- **Intervention 8: Promote cleaner and renewable energy.** The city is primarily dependent on electricity derived from coal-fired power stations which is also a source of revenue for the city. This dependence translates into close to half of the city's carbon emissions. An Embedded Generation Policy (EGP) has been established and there is a steady progression of renewable energy installations within the city that are below the licensing threshold. The city is investing in renewable energy systems for own use to reduce operational costs, with hydro-energy gaining traction in the water reticulation system. Together with the above, the city is advocating for low carbon alternative energy solutions to meet suppressed demand, particularly within informal settlements.
- **Intervention 9: Divert waste from landfills and find innovative uses for waste.** The GPC Greenhouse Gas Emission Inventories indicates that 10,848,006 of CO<sub>2</sub> is produced annually, based on current waste management practices. Little diversion of waste takes place and recycling typically occurs through informal recycling practices. The city aims to facilitate and implement the following:
  - Diversion of waste from landfills, through the implementation of separation at-source and recycling infrastructure;
  - Processing of residual waste to produce energy, and;
  - Capturing of landfill gas to power vehicles.
- **Intervention 10: Pursue sustainability support mechanisms.** A key lever for change is the city's purchasing power and hence a Sustainable Procurement Policy (SPP) has been adopted. The SPP aims to ensure that the city's capital and operational expenditure supports a sustainability agenda. Uptake is being prompted through supplier development programmes to enable suppliers to fulfil the requirements of revised, more sustainably oriented specifications. The city is a member of the Global Lead City Network on Sustainable Procurement. Examples of sustainable procurement implemented, include:
  - Tshwane House, the city's municipal headquarters, which was scoped to be a five-star green building;
  - The purchasing of electric vehicles for the corporate messenger fleet, and;
  - CNG propelled buses for the TRT system.

The interventions which have been outlined above speaks to city wide adaptation and mitigation strategies. In planning and effecting these ten (10) interventions, the climate response strategy emphasises the importance of climate mainstreaming by having sustainability champions in each department and ensuring representation in key decision-making forums such the Budget Steering Committee (BSC) and the BEPPSCO. Refer to Chapter 7 of the BEPP for institutional arrangements pertaining to the BEPPSCO, and to Chapter 4 which outlines the introduction of CR&R focus areas within these forums and the capital planning and prioritisation process. Chapter 14 outlines the

Capital Prioritisation Model (CPM) of the city and indicates where the results of the social vulnerability assessment together with the ten (10) intervention programmes have been incorporated into the model.

## 11 Institutional Arrangement

### 11.1 Spatial Transformation

The theory of change with respect to spatial targeting, aims to achieve key actions, namely:

- The identification of a Public Transport Backbone;
- The Establishment of Transit Oriented Development, and;
- The unification of a clear spatial policy directive.

It further sets achievable targets, by for public and private sector, relating to compaction of housing and a diversified land use mix; densification and better space efficiencies; increased access to transport choices and prioritised investment in catalytic land development programmes.

The mentioned actions and targets aim to realise the ultimate vision of the City, with respect to spatial targeting, which are clearly defined as a stimulated economy which results in economic growth and job creation; an inclusive City; improved service delivery and a well-protected natural environment.

To date, the City has made significant changes to position itself towards the achievement of the said targets. The City constructed its first line as part of the IPTN network, which represent the beginning of a public transport backbone. It has prioritised several precinct plans, related to Transit Oriented Development, which are ready for private sector uptake. There is, however, still a lot to be done, and if executed correctly, can fast-track the City towards the desired future state.

The City has set about in updating the MSDF, which incorporates several elements that was previously lacking. Key updates include the delineation of integration zones, mixed use areas, housing development, and agricultural activity. The MSDF should serve as guide to other public entities such as provincial government, when spatial conceptualisation and strategizing occurs. This will lead to more space efficiencies, coordinated investment, optimisation of limited public resources and essentially long-term benefits on a national scale. This will be realised through continual engagement on the Tri-metro forum – but with specific focus on spatial targeting. The end goal would be a true meeting of the minds between metropolitan and provincial spatial targeting.

**IPTN Operational Plan:** The IPTN is the first project of its kind in the City. To date, it resulted in a functional activity spine, that runs through the heart of the City, connecting areas that was previously disconnected, and restructuring the urban form even this minute. The original Operational Plan must however be revised as several underlying deterministic forces have changed since the inception of the IPTN program. An alteration in the IPTN operational plan, will have a direct impact on spatial targeting initiatives, and so on spatial restructuring targets.

**Human Settlements Plan:** The human settlements plan utilised within the City, guiding public sector investment in human settlements was drafted as part of the National Upgrading Support Program in the absence of a local level human settlements plan. The result being a reinforced spatial structure as opposed to a restructured spatial structure. The City has, since the previous reporting period, established a subdivision within the department of human settlements, specifically responsible for

policy formulation – with the intent to develop the City’s policy on Human settlements development and to compile a specific plan regarding human settlements.

Transport and Housing Alignment: Though it will probably never be possible to provide alternative housing for all of the residents currently living in peripheral areas of the City of Tshwane, the most likely solution is to do everything possible to enhance the sustainability of existing housing development for the poor in these areas, but to refrain from encouraging extensive future expansion of the footprint of such peripheral areas. Instead, the approach should rather be to concentrate on offering a choice of housing in areas as close to the core areas of the city as possible in line with the Breaking New Ground Policy. In this regard the focus should be on the following areas:

- Existing metropolitan activity nodes and corridors as well as integration zones as identified in the MSDF;
- Centralised locations where there are vacant municipal, state and parastatal-owned land;
- Areas close to major inter-modal transportation facilities and specifically the Integrated Rapid Public Transit Network of the city, and;
- In the longer term, new areas with a definite potential to become metropolitan activity nodes.

Land Release Strategy: The City is in process to develop a Land release Strategy, that will aim at selling off land in areas that has little market potential and / or reinforce the inherited urban structure. In turn the City will aim to purchase land in areas such as the integration zone, and other catalytic land development areas.

Precinct Planning and Land Use Development Forums: There are more than 40 precinct plans in the City, planning desired interventions and spatial structuring on a micro level. One of the key role players in this environment, on this level, is private sector developers. In order to entice the stimulation of the economic as desired by the City and as expressed by the City’s Precinct Plans the City need to engage with private sector. Since the previous reporting period, the City has conducted several Planning Forums with the aim to gauge and guide public sector in development initiatives across the City.

## **11.2 Climate Mainstreaming**

### **11.2.1 Climate Mainstreaming Effected in 2019/20**

The 2019/20 BEPP outlined the structure of the City Sustainability Unit (CSU) together with the core elements which constitutes the City’s Climate Change Profile namely mitigation; adaptation and sustainability financing and support mechanisms. Each of these elements consisted of focus areas specifically in line with the establishment of guideline documents and programmes. The 2019/20 BEPP also outlined the contribution made through the C40 Cities Climate Leadership Group and technical assistance provided to the CSU. This led to the establishment of climate change expertise and a number of initiatives/collaborations with various departments. For more information refer to Addendum 4 which describes the establishment and institutional arrangement included in the previous BEPP submission.

### **11.2.2 Development of the Climate Action Plan**

Following the development of the Climate Response Strategy in 2017, the City Sustainability Unit has embarked on a process, with technical support from C40 Cities Climate Leadership Group, to develop



a CAP that will provide guiding interventions with a thirty-year trajectory (2050). The outcome of the CAP aims to achieve a City which is carbon neutral and climate resilient by 2050. A key driver for this will be the establishment of a dedicated climate budget which will allow for the financing of specific projects designed to address climate change.

The planning process is comprised of the following workstreams: mitigation; adaptation; financing; climate mainstreaming; stakeholder engagement and communications and governance. Each workstream is headed up by an official in the CSU and involves engaging with interested and affected parties, both internal and external, that have a bearing on each workstream.

The process started in April 2019 when C40 appointed a technical advisor to guide the process. Several milestones have already been achieved which include a situational analysis, a stakeholder-driven SWOT analysis, and in-city workshops focusing on mitigation scenarios and complementing actions. The adaptation component has trailed behind somewhat as special provision was required to appoint the CSIR to assist the municipality with the adaptation planning as C40 funding was directed at mitigation only.

The intention is for the plan to be approved by Council by March 2021, namely before the next local government elections. Therefore, a draft document will be required for public circulation by the end of 2020.

### 11.2.3 Adaptation Planning

In 2015, with technical support from the CSIR, the City completed its first Climate Risk and Vulnerability Assessment (refer to Chapter 10.1). The follow up to that body of work was an Urban Heat Island (UHI) study that determined the presence of urban heat islands in the City for current temperature. The next phase of the work will focus on the manifestation of the urban heat island effect for future temperature and will yield ward-based urban climate maps that will guide the exact interventions we need at a micro-scale. Due to the nuances of climate impacts, this is the surest way of ensuring that we build resilience from the ground level up.

The second phase of the urban heat island study is incorporated into a larger scope of work that CSIR has been appointed to render as part of the adaptation component of the Climate Action Plan. The scope of work entails the following areas:

#### 11.2.3.1 Work Package 1: Phase II to Propose an Urban Heat Mitigation Strategy

Work in Phase II will build on the work that was already done in Phase I of the project, and will include the following tasks:

- **Task 1: Assess the impact of exposure to heat and the risk and vulnerability of communities in the current climate.**

The high-resolution model outputs will be used to assess and quantify the vulnerability of, and the impacts on human health. The assessment will use a Human Health Impact Assessment framework. Heat thresholds will be defined through a literature review, and applied in this task, Task 3 as well as in Working Package 4 for the heat aspects.

- **Task 2: Simulate UHI under future climate change with planned urban development (e.g. future business as usual (BAU)).**

The Tshwane-tailored urban model developed in Phase I for current climate, will be updated for a future Tshwane (BAU). Using this parameterisation of the city, the UHI under future climate will be

simulated. Regional CCAM output will be further dynamically downscaled using the Conformal-Cubic Atmospheric Model (CCAM) Urban Climate Model (UCM) Town Energy Budget (TEB) model to produce high-resolution climate scenarios of all-important variables for the development of the heat profile over the City of Tshwane. An important consideration here will be the uncertainties that are introduced by the second layer of downscaling, noting that these already exist when downscaling Global Circulation Model (GCM) data. It should also be noted, at this point, that the future climate change scenarios produced in this task assume current levels of the controllable factors or variables.

It is anticipated that the impacts of climate change on the future development of urban heat islands over Tshwane for the period 2016-2050 will be simulated under the business-as-usual climate scenarios (RCP8.5). The assessment will focus on future time slices of interest to Tshwane. These will be confirmed in the inception phase.

In addition to using these simulations in the following tasks in Working Package 1, these simulations will be used in the other Working Packages to provide high-resolution analyses/inputs of exposure to climate variables and extremes.

- **Task 3: Assess the impact of exposure to heat and the risk and vulnerability of communities under future climate.**

This assessment will use the same method as described in Task 1, but, this time, will use the future climate projections. The team will also model population growth areas (in Working Packages 2&3) which will be overlaid with high risk areas in the city making it possible to assess the potential risk to health and the extend of that in terms of numbers of exposed people and the spatial distribution of them.

- **Task 4: Develop urban climate maps.**

Urban climate maps will be developed for current and future climate in order to spatially identify UHI and resultant impact hotspots at a ward level. The development of the urban climate map will enable the assessment of the effects of existing urban structures on the UHI so as to understand the underlying climatic sensitivity (thermal load and ventilation paths) of the urban spaces within Tshwane Municipality. The urban climate map will be a tool that can be used to support the prioritisation of interventions (Task 5, below).

A detailed plan for the City to mitigate urban heat impacts will be developed in Tasks 5-7. These tasks align with the broader activities in Working Package 4, and aspects of this task will form part of and be integrated with that work. Through these tasks, the adaptation actions for mitigating the UHI and heat impacts will be assessed and will contribute to Working Package 4. As this work will develop actions through a detailed heat mitigation strategy that will inform Working Package 4, the tasks are detailed here in Working Package 1.

- **Task 5: Develop options to mitigate the UHI and make key recommendations.**

The prioritised technologies, in conjunction with the urban climate maps and activities in Working Package 4, will be used to identify and recommend focussed climate adaptation actions for specific areas identified as being potential UHI hotspots. These will be framed within the adaptation scenarios developed in Working Package 4.

The information derived in the preceding deliverables will be used to initially compile recommendations on how the City can respond to urban heat challenges. This will highlight the key areas with high temperatures and suggest possible interventions that could be implemented in these areas. Linkages will be made to current projects, programs, plans and policy development that could

support or strengthen such interventions. Areas for further uptake and technological innovation gaps and the resulting/actions needed, will also be highlighted. Recommendations on the key capacity and financial requirements to implement the interventions will also be included.

The prioritised technologies will be used to develop climate adaptation (e.g. prioritisation of open spaces) and localised GHG mitigation pathways for the City through use of the urban climate maps developed in Task 4. The opportunities for these prioritised technologies to support the goals of the GHG mitigation pathways developed in the CAP will also be considered.

- **Task 6: Assess the UHI under future climate change under different development/intervention strategies.**

It is planned that these identified actions from Task 5 and together with the broader adaptation scenarios developed in Working Package 4 will be modelled in TEB-CCAM to quantify the impact on the UHI. If there are actions that cannot be simulated (e.g. drivers or parameters that do not exist in the model), this will be identified in Task 5 and assessments using other techniques (e.g. urban climate maps) would be explored.

The impact of the interventions on the UHI will be assessed in order to understand the impact of the strategies. The number of scenarios that can be modelled will depend upon the complexity of interventions and the difficulty in modelling the interventions.

- **Task 7: Develop the Urban Heat Mitigation Strategy for Tshwane.**

The content of this will be confirmed with Tshwane. It is anticipated that the other deliverables listed here are technical in nature, while this document will be a non-technical, integrated report, documenting the synthesised results which will be used to recommend appropriate UHI mitigation actions to Tshwane, for both now and into the future.

- **Deliverables:**

- Health Assessment of UHI in current climate
- Future projections of UHI
- Assessment of health impacts in future climate
- Urban climate maps and options
- Report on key recommendations
- Assessment of intervention scenarios
- Urban Heat Mitigation Strategy
- In addition to these UHI specific deliverables, this WP will develop the heat-related aspects for Working Package 4. This includes, key resilience indicators and their thresholds, and adaptation actions.

### **11.2.3.2 Work Package 2: Update the Climate Risk and Vulnerability Assessment**

Assessing vulnerability to climate change is an essential task for identifying, quantifying and prioritising key climate risks, vulnerable communities, sectors or regions and enables decision-makers to develop appropriate response measures to adapt to climate change (O'Brien et al., 2009). Climate

change risk and vulnerability assessments provide an indication of the range of risks that could affect human settlements and should include and quantify the spatial extent and intensity of how these hazards (including floods, droughts, extreme heat, and other hydro-meteorological hazards) will change under a shifting climate.

CoT commissioned such a CRVA study and the findings were incorporated in 2015 in a report “City of Tshwane Vulnerability Assessment to Climate Change”. The report was reviewed by C40 and an update on certain sections/thinking was encouraged to facilitate the climate adaptation planning process and provide quantitative scientific evidence on high risk climate zones. In the past four years a number of highly relevant, novel and new supporting studies and methods have emerged and/or is currently in process to enhance the understanding of high-risk zones, which should be consolidated and incorporated. New scientific evidence and findings have also emerged taking a more forward-looking approach into account and should, where feasible, be considered and incorporated.

Output from Working Package 1 will be an input for this piece of work. The outcomes of this work package will be applied to directly influence the development of Working Package 3 and will form the base for discussion and support of Working Package 4. All new and existing evidence being generated, compiled and/or consolidated in this study will be made available via Working Package 5 and integrated where necessary within the CoT Corporate GIS and Disaster Management Centre.

The various tasks anticipated in this work package include:

- **Task 1: Rapidly screen current studies and available data with bearing to CRVA**

The purpose would be to investigate, understand and consolidate current studies conducted by e.g. the Disaster Management Centre, Corporate GIS, external consultant reports, etc. It is necessary to understand the spatial resolution, modelling approaches and availability of data to know which elements in the CRVA update needs more attention and what data has already been produced and is ready for streamlining. This will be done through a series of short engagements with current consultants, departments, reports and new findings that emanated over the past 4 years.

- **Task 2: Scope the CRVA elements to be updated**

Based on the review of C40, the required BEPP and CAP support and the understanding from Task 1, this task seeks to agree on the elements (data, indicators, information) to be incorporated (if already available) or to be analysed, modelled or constructed (if not available). The scoping study will also identify the desired resolution, scale and dimensions that should be included in the updated CRVA analysis.

- **Task 3: Conduct the CRVA assessment**

Conduct the CRVA assessment for identified elements. The level of detail and decision support provided by a climate risk and vulnerability assessment is highly dependent on the question and scale of the study. The elements that will be assessed and updated will be dependent on agreement and based on the findings in the two tasks above. It is vital that the evidence emanating from this study directly support the identification of high-risk climate zones in order to align the desired adaptation responses appropriately.

- **Task 4: Prepare CRVA findings in required format**

Compile necessary maps, statistics and information to support Working Package 3 and 4.

- **Deliverables:**

- Updated CRVA information in support of identifying high risk climate zones (Working Package 3).
- Customised indicators and information to be refined, to support climate adaptation plan (Working Package 4).
- Agreed upon maps, statistics, indicators and information compiled in a geodatabase at the desired resolutions and temporal scale, ready to be uploaded and implemented as part of an online planning support system (Working Package 5).

### **11.2.3.3 Work Package 3: Produce Climate Risk Zones**

One of the strategic focus areas for the BEPP for the next three years is to mainstream climate-responsiveness and resilience into municipal planning, budgeting, and reporting processes. Requirements are set out to metros through the BEPP Supplementary Guidelines in support of reaching this goal. One of these requirements is to identify climate risk zones in the metropolitan area. This is in support of the outcomes required for the Tshwane Climate Action Plan and will therefore be addressed through this Work Package.

The climate risk zones will reflect on climate hazard exposure (flooding, heat and wildfire extremes), vulnerable infrastructure, and vulnerable communities within the metropolitan area. The risk zones would provide a basis for identifying priority areas for adaptation interventions.

Initial information, data sources and methodologies have been identified that can inform the identification of current as well as future climate risk zones in the City of Tshwane:

- High-resolution (e.g. 1 km<sup>2</sup>) downscaled climate model outputs available for the City that will be used to model the impact of climate on extreme events (e.g. flooding, heat (Work Package 1) and wildfire-extremes); and the 8 km x 8 km downscaled climate change projections that will be used to model future impacts.
- The updated Climate Risk and Vulnerability Assessment from Working Package 2.
- Population growth projections at a high resolution.

A detailed methodology for identifying climate risk zones will be developed during the inception phase of the project. During this phase additional City data and information sources will be identified to identifying vulnerable infrastructure, e.g. asset management information and/or property valuations.

- **Deliverable:**

This work package will produce a geodatabase of climate risk zones that would support the BEPP and the adaptation component of the Tshwane Climate Action Plan. The Climate risk zones data in addition to the updated CRVA data will be uploaded and implemented in an online planning support system (Working Package 5).

### **11.2.3.4 Work Package 4: Identify Adaptation Actions, Resilience Factors and Thresholds, Develop Adaptation Scenarios**

Based on the existing and updated risk and vulnerability assessment, climate change adaptation actions will be identified and evaluated by considering vulnerability as determined by exposure, capacity and susceptibility. Based on the outcome of Work Packages 1, 2 and 3, this work package will



identify adaptation actions and key resilience factors, develop adaptation scenarios, and identify resilience factor thresholds. The detailed methodologies for the proposed tasks under this work package will be developed during the inception phase.

- **Task 1: Identify adaptation actions and resilience factors**

Adaptation actions and resilience factors will be proposed for the various climate risk zones in the City. A methodology for the identification of criteria to prioritise adaptation actions will be developed through engagement with CoT and other stakeholders. Criteria for prioritising adaptation actions may include the extent of their impact, inclusive benefits and on their ability to fulfil City objectives. The C40 and Ramboll Foundation Monitoring, Evaluating and Reporting Framework (C40 and Ramboll Foundation, 2019) could, for example, be used as a point of reference to identify such adaptation actions in addition to the ones that have been identified in the Green Book. The C40 AMIA tool could, for example, be used to identify potential interactions between the adaptation and mitigation actions in order to maximise the opportunities for mutual reinforcement and minimise the potential risks and conflicts.

The potential social, environmental and economic benefits of actions will be assessed to ensure alignment with local priorities. The communication of these benefits will demonstrate the overall value of climate adaptation, helping to articulate the business and social case for action and the tangible benefits for communities. An assessment of the collective benefits of the adaptation plan will be undertaken to evaluate the equitable distribution of, and accessibility of benefit by vulnerable groups. This will indicate the extent to which inclusivity has been taken into account across the suite of actions and how specific vulnerabilities or inequalities in the city are addressed within the adaptation plan. Potential barriers to implementation will be identified early on in the process of identifying adaptation actions. These could relate to the changing political or regulatory landscapes; internal city operations and capacity; access to finance and engagement with stakeholders; and emerging technologies, innovations and disruptors. This task will also highlight the impact and cost of not adapting sufficiently.

This task also includes a desktop analysis of multiple resilience factors, variables and indicators that can be found in local literature and policy frameworks. From this body of literature, the key resilience factors relevant to adaptation planning, that are appropriate to the context, will be distilled and presented to the City and selected stakeholders and peer-reviewers.

The full list of adaptation actions and resilience factors will be informed, where possible, by impacts from existing actions and major actions implemented/planned by other tiers of government. Stakeholder involvement is therefore required in this task.

- **Task 2: Develop adaptation scenarios**

The mitigation planning process that also forms part of the Climate Action Plan has identified three GHG mitigation scenarios. The same concept can be applied to adaptation planning. Three adaptation scenarios, based on the risk profile of the City, will be developed. Examples of scenarios could include: what will the impact be when no adaptation measures are introduced; what will the impact be when some adaptation measures are introduced (a realistic outcome given the City's resources and capabilities); and what will the impact be when all proposed adaptation measures are implemented to safeguard the City against potential climate risks, regardless of cost.

The final selection of adaptation scenarios will be workshopped and developed with the input from selected internal and external stakeholders. Linkages to the mitigation scenarios will be made where applicable, to emphasise opportunities for synergies.

- **Task 3: Determine resilience factor thresholds**

Once agreement has been reached on the resilience factors, the thresholds of these factors will be determined (qualitative or quantitative, depending on the availability of data). The method for extracting and determining these thresholds need to be developed as part of the inception phase of the project.

- **Deliverables:**

- Adaptation actions that will be linked interactively to the high-risk zones in the online tool.
- Various workshops and stakeholder engagements.
- Three adaptation scenarios.
- Key resilience indicators and their thresholds.

#### **11.2.3.5 Work Package 5: Disseminate via Online Planning-Support System**

The CSIR has recently developed a novel, online municipal decision support tool called the Green Book: Adapting South Africa's settlements to climate change ([www.greenbook.co.za](http://www.greenbook.co.za)). It has been enthusiastically received by stakeholders in the climate change adaptation space and commended as the way to go with disseminating research findings and recommendations. It is proposed that this platform be used and amended as a means to host most of the output from the various work packages such as key research findings, maps, datasets, recommendations, etc. on the existing Green Book site under the City of Tshwane profile. Since the technologies and platform have already been designed and developed, the City will hugely benefit from this investment, and will save costs by not having to develop a new system or tool. Other benefits include accessibility of information to all municipal departments, its consultants, business customers and residents. The platform will thus provide baseline information for further work to build on, reduce duplication by departments, develop a shared understanding of the issues related to climate change and its impacts on the City, and promote mainstreaming of scientific evidence and climate adaptation actions into all municipal sector department plans.

A specific need has been expressed by the City that such an online platform should allow the users to be able to extract the data that they need for their various purposes from such a platform. This is not an explicit function that the Green Book has currently. However, CSIR does have the necessary ICT infrastructure, safety protocols and server environments to allow the development and inclusion of this additional functionality in the custom environment that will be developed for the City.

- **Deliverable:**

- Online dissemination platform

#### **11.2.4 Climate Mainstreaming Way Forward**

Much of the work being undertaken by the City Sustainability Unit concerns climate mainstreaming whether it be commenting on policies and plans from a climate change perspective or developing by-laws and specifications to achieve particular sustainability outcomes. Key to climate mainstreaming is applying science to City functions whether it is demonstrating how a City function can emit less greenhouse gas emissions or contribute to the lessening of greenhouse gas emissions or how a City function can adapt to changing climate as a risk reduction and resilience building measure.

The science is embodied in the greenhouse gas emissions inventory, the most recent one is for 2015/16 financial year and the Climate Risk and Vulnerability Assessment (CRVA) which is now being updated.

The Unit is constantly identifying “entry points” or opportunities to influence policies and plans by applying knowledge on a particular issue – in this case it is the findings of the greenhouse gas emissions inventory and the climate risk and vulnerability study. There are four main entry points namely legislated plans, capital plans, bylaws and policies, and supply chain (sustainable procurement especially with regard to operational expenditure which is far greater than our capital expenditure).

- **Legislated and sector plans:**

Some of the key legislated plans that can benefit from climate action mainstreaming include the Integrated Development Plan (IDP), the Integrated Transport Plan, the Integrated Waste Management Plan, the Disaster Management Plan, the Air Quality Management Plan, and the Macro and Regional Spatial Development Plans. To date, we have been engaged successfully with all of these plans and to a lesser extent with the IDP.

The Comprehensive and Integrated Transport Plan (CITP) has an entire chapter dedicate to sustainable transport addressing non-motorised transport and a modal shift to low carbon technologies. In this financial year, as a deepening of the intentions of that chapter, the City in association with the C40 Climate Finance Facility, has embarked in a process planning and scoping study for an urban modal shift. Here the focus is on incorporating NMT infrastructure on Solomon Mahlangu Driver (M10) from Nellmapius to accommodate the many people that commute on foot and bicycle.

As the main planning tool for the City, the Integrated Development Plan, we have had limited impact. We are typically associated with one of five Strategic Pillars and this is referred to as Pillar 3: A City that delivers excellent services and protects the environment. Our approach has always been that sustainability is cross-cutting and has relevance to all strategic pillars. An example: Strategic Pillar 4 states that we are a city that keeps residents safe - this pillar is vital for supporting the goal of reducing transport related emissions through cycling and walking but if people do not feel safe than they will prefer to move around using motorised transport. This observation indicates that climate mainstreaming still has a way to go but the adoption of the Climate Action Plan should assist with mainstreaming particularly where departments and departmental leadership are assigned Key Performance Areas (KPA's) and Indicators that are aligned to the achievement of the plan.

- **Precinct Plans**

SPLUMA guidelines make provision for precinct plans. City Planning has developed a precinct guideline and we have had our first experience of applying climate change knowledge to that plan through an advisory committee focusing on the Hatfield village. The use of precinct plans to advocate for climate change mainstreaming was incorporated into the former BEPP submission and recognized for being innovative.

We see major opportunity in incorporating climate actions in Precinct Plans. Precinct plans allow for addressing concerns such as heat stress, air quality management, climate proofing of infrastructure, green buildings development, NMT promotion (pedestrianisation, cycling lanes), pocket parks and greening, storm water retention and management of stormwater drains, separation at source and recycling programmes.

- **Macro Spatial Development Framework**

The MSDF has been updated internally in the 2019/20 financial year and all departments were engaged on their plans for the future and variables and indicators that need to be incorporated into the revised MSDF. The Climate Risk and Vulnerability Assessment has been a source of some of these variables and indicators as well as the outcomes of the urban heat island study. The latter is incredibly important as there is conformity between the City's development trends and the manifestation of the urban heat islands. Therefore, in projecting and shaping development, the MSDF needs to be explicit on the need for cooling measures and these then need to be reflected in the Landuse Scheme since the UHI is a cumulative effect of individual developments, each with insufficient passive cooling measures.

- **Capital Planning**

The BEPP has been instrumental in creating the opportunity to address Climate Responsiveness & Resilience in planning for the built environment. The focus now is how to incorporate the updated Climate Risk and Vulnerability Assessment so that the prioritization of capital projects is influenced by the sort of vulnerability it is addressing and its relationship to identified climate risk zones. More importantly and this has not been addressed as yet is that in the planning of capital projects these considerations are at the very forefront of the process.

- **Supply Chain**

In 2014, the City Sustainability Unit initiated a discussion on sustainable procurement, and this led to the development of a Sustainable Procurement programme that included addressing the notion of sustainable procurement. Where possible and feasible, the City Sustainability Unit endeavours to comment on specifications and be part of particular bid specification committees. One example is the Tshwane Housing Company where we sat on a bid specification committee and comment on a specification for social housing. In this example, we advocated for low-flush toilets to be included. However, the Unit also promotes demonstration projects, and in this financial year, it financed the installation of a photovoltaic system on the roof of the Tshwane Leadership and Management Academy to demonstrate that embedded generation in City-owned buildings can both improve the reliability of supply (particularly when there is load shedding and outages) and reduce the operating costs of the building.

- **Bylaws & Policies**

The best example has been the development of the Green Building By-law which is now being reviewed and will address incentives and mandatory measures such as rainwater tanks and embedded generation. Another example is the commenting on the Tshwane Landuse Scheme and there was scope to apply the results of the heat mapping study. In our comments, we emphasized the importance of retention of cool and permeable surfaces particularly for developments located in an existing urban heat island.

### **11.3 CaPS TTT and BEPPSCO Guidance**

During the 2020/21 budgeting and reporting cycle, the CaPS TTT and BEPPSCO has facilitated a number of key discussions between infrastructure departments. The objective of these discussions was to inform various role players of crucial planning alignment concerns which have been noted during the compilation of the BEPP and to initiate the process of addressing these concerns. These discussions also formed the framework in which to guide service provision departments to plan capital investment in line with the City's spatial and strategic vision. For more information on the CaPS TTT and BEPPSCO refer to Section A.

One of the more important discussion that was facilitated through the CaPS TTT was between the Roads & Transport and Housing & Human Settlements. This discussion took place on the 13th of February 2020 and was aimed at understanding the planning strategy within each department which includes focus areas and areas identified for investment, together with addressing the issue of silo-based planning.

Housing identified five instruments that are at their disposal to leverage housing development in the City. The first instrument, and arguably the most important one, is the Human Settlements Development Plan of 2014. The plan serves as the go-to mechanism when the department needs to give input regarding housing and human settlement interventions. The plan is currently in draft format, with an updated version in revision. The second instrument is the Provincial Mega Housing Project. From a local government perspective, this instrument has its limitation, however, still result in housing unit yields. The third instrument is human settlement specific grant, which are specifically focussed for catalytic development purposes. Given the current level of integration, and the requirement from National Treasury that catalytic development occurs in an integration zone, it is difficult to leverage this instrument successfully, as the definition of an integration zone up to this point in time, was space. With the update of the MSDF, this should no longer be an issue. The fourth instrument is the City's budget. Based on the prioritisation model, certain readiness attributes are required per project in order to mature to a budget-able project. Often, these readiness aspects relate to functions and inputs from other departments – which makes it difficult to deliver on projects within the budget. The fifth instrument is a land banking strategy. The strategy is under review and if approved, will enable to City to effectively sell off land on the periphery of the City, and acquire land in areas that will lead to urban restructuring; such as within an integration zone.

Transport identified that it's main focus is to eradicate infrastructure backlog – which can be summarised as a variety of smaller projects per region. The main lever guiding transport are the Integrated Transport Plan, the Roads Master Plan and the Stormwater Master Plan. Transport also indicated that little integration occurs in the planning process between the two departments, and the mandate of both departments overlap with respect to road service provision. This result in confusion and conflict between the two units. The institutional arrangement that followed realties back to the CaPS TTT to facilitate integration and so, alignment.

During the 2020/21 budgeting and reporting cycle, the City also facilitated and attended a number of engagements with the CSIR and CSP coordinator regarding climate change mainstreaming in the built environment. These discussions were aimed at understanding the challenges of mainstreaming climate change within the City and identifying areas for improvement or assistance. The outcome of these discussions included addressing data gaps, integration points between City processes and climate change mainstreaming and aligning the future outcomes of the CAP with infrastructure planning. For more information on climate change mainstreaming specifically focussed on adaptation, refer to Chapter 11.2.3.

Addendum 5 includes the agenda, attendance and meeting notes from both the transport and housing discussion and the climate change mainstreaming discussions.





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## Section C: Catalytic Land Development Programme & Preparation



## Section C: Catalytic Land Development Programme Preparation

The CSP's Guideline for Catalytic Land Development (2018) defines Catalytic Land Development Preparation (CLDP) as an outcome of the Urban Network Structure (Spatial Targeting - UNS) and aims to promote capital investment based on a clear set of objectives and spatial rational. Catalytic land development builds on the concept of spatial targeting, through a more focussed approach to identifying precinct level intervention areas, which have been prioritised based on integration between transport and mobility; sustainable human settlements and urban infrastructure.

In terms of the City's theory of change, the principle for spatial transformation filters through to CLDP. Section B of the document identified the broad spatial transformation vision of the City by identifying its UNS and spatial structuring elements in terms of the MSDF, as well as setting the foundation for specific spatial targeting in support of an identified and delineated Integration Zone. Although the majority of Section C focusses on the principle of spatial transformation, outcomes and actions from the principle of Collaborative Planning, Implementation and Management also plays a vital role in establishing an intergovernmental project pipeline together with financial sustainable resourcing.

The intra- and inter- dependency between spatial transformation; financial sustainability and good governance is still of upmost importance and will ensure sustainable economic growth as a result of increased capital investment together with achieving an intergovernmental planning reform.

Figure 38 Theory of Change

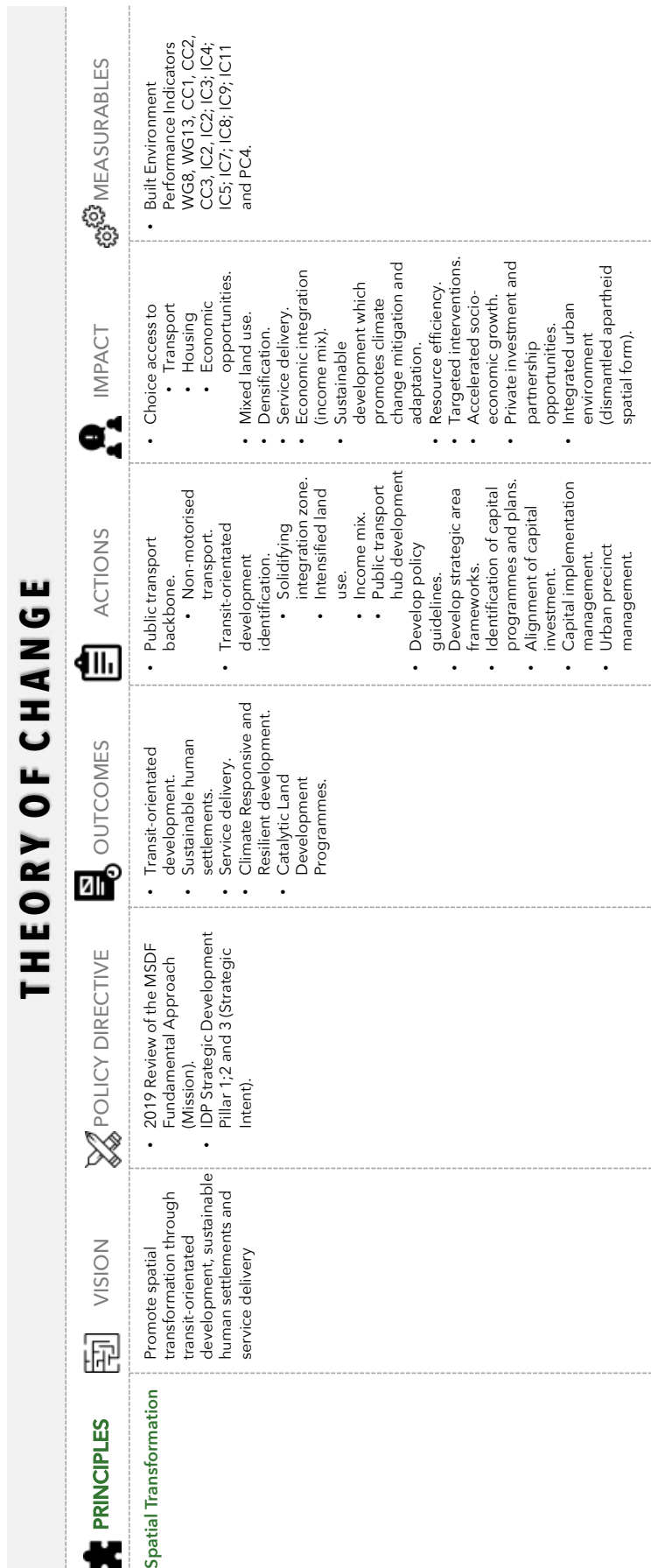


Figure 38 indicates CLDP as an outcome of spatial transformation and contains a concentrated set of actions to achieve spatially targeted investments. These include the identification of spatially targeted capital programmes or projects, the alignment of capital investment to targeted objectives and the development of urban precinct management frameworks. Through actioning these outcomes, spatial targeting, aimed at spatial transformation, will focus and optimise the distribution of current and future capital investment and in turn promote private investment and public-private partnerships. This further unlocks additional socio-economic growth opportunities, together with sustainable human settlement patterns, which promotes resource efficiency and adaptation to climate change impacts.

In terms of the BEVC, the following section has been structured to align to the second component within the value chain and describes the process of CLDP identification and formulation. This includes the methodology for identifying these programmes and the evaluation criteria applied to prioritise capital investment.

In order for the city to develop a prioritised list of capital projects, which supports and aligns with the CLDPs, the city has adopted the use of a spatially enabled Capital Planning and Prioritisation System (CAPS). CAPS is the mechanism through which planning theory and strategic objectives are linked and facilitated by the budgeting and implementation processes of the City. Chapter 14 outlines the prioritisation methodology and criteria of capital projects which enables spatial targeting and focussed investment to achieve sustainable urban development and efficient capital investment. Chapter 18 builds on the results of the prioritised list of capital projects and the Draft Capital Budget for 2020/21 (IDP Annexure A) which includes CLDP projects for inclusion into Annexures 1, 2 and 3 of the BEPP report.

The second component of Section C highlights the intergovernmental project pipeline functionality and the benefits that can be derived from collaborative investment planning with different spheres of government. Chapter 15 aims to provide an overview regarding intergovernmental alignment of provincial planning focus areas to the city's spatial targeted areas. Projects identified from the provincial budget planning and implementation processes will be evaluated and spatially linked to the city's spatial targeted areas (Chapter 19), based on the draft provincial 2020/21 MTREF budget, and will form part of the intergovernmental project pipeline CLDP's as indicated in Annexure 2 and 3 of the BEPP report.

## **12 Catalytic Land Development Programme Preparation**

The Built Environment Performance Plan Guidelines developed a definition of a catalytic project and remains unchanged since 2015/16 MTREF cycle. The definition of catalytic urban development projects is formulated as land development initiatives that:

- Are integrated, that is mixed and intensified land uses where the residential land use caters for people across various income bands and at increased densities that better support the viability of public transport systems;
- Are strategically located within integration zones in metropolitan municipalities; and are game changers in that the nature and scope of the projects are likely to have significant impact on spatial form.
- Require major infrastructure investment;
- Require a blend of finance where a mix of public funds is able to leverage private sector investment as well as unlock household investment, and;

- Require specific skills across a number of professions and have multiple stakeholders.

The City of Tshwane recognises the definition of catalytic projects defined by National Treasury; however, the city should embark on a process to interpret the definition and identify a methodology of identifying and qualifying the programmes and associated projects as catalytic.

## 12.1 Catalytic Land Development Programme: Identification criteria

From the definition, the city identifies the following evaluation criteria elements:

- “Are integrated, that is mixed and intensified land uses where the residential land use caters for people across various income bands and at increased densities that better support the viability of public transport systems”;
  - Integrated
  - Intensified land use
  - Various income groups
  - Increase densities
  - Public Transport support
- “Are strategically located within integration zones in metropolitan municipalities; and are game changers in that the nature and scope of the projects are likely to have significant impact on spatial form”;
  - Strategically Located
  - Integration Zones
  - Scope have significant impact on spatial form
- “Require major infrastructure investment”;
  - Size of budget
  - Infrastructure
- “Require a blend of finance where a mix of public funds is able to leverage private sector investment as well as unlock household investment”, and;
  - Mix of Funding sources
- “Require specific skills across a number of professions and have multiple stakeholders”.
  - Number of Stakeholders

The identified criteria elements are consequently converted into measurable criteria.



Table 16 CLDP Measurable Criteria

Theme		Weight	Criteria	Weight	Tshwane Measurable Indicator	Logic
1	Are integrated, that is mixed and intensified land uses where the residential land use caters for people across various income bands and at increased densities that better support the viability of public transport systems	30%	Integrated	25%	If MSCOA Project Type = Softer Services, Hard Services	If {project} is {MSCOA_Type} is {Social Related and Infrastructure related}; rank high
			Intensified land use	20%	Within Urban Edge (The closer you are a municipal node – CBD, Metro, Urban Core) the better)	If {project} is within {Urban Edge}; rank high
			Various income groups	10%	Income mix of Poor:Middle:High Of 40:50:10 per hexagon modelling zone	If {project} is within {hexagon}; rank high
			Increase densities	15%	MSCOA – Upgrading And SDF Zoning = 60-100 du/ha	If {project} is {MSCOA_Upgrading}, and within {Density Zone 60-80}; rank high
			Public Transport support	30%	Situated within 800m of a public transport route	If {project} is within {800m Buffer}; rank high
2	Are strategically located within integration zones in metropolitan municipalities; and are game changers in that the nature and scope of the projects are likely to have significant impact on spatial form	30%	Strategically Located	50%	Within the key Spatial Structuring Elements of the City	If {project} is within and{Capital Core, Metro Nodes, Urban Nodes, Integration Zones, Underserved Areas}, rank high
			Integration Zones	30%	Within the Integration Zones, as defined by National Treasury	If {project} is within and{800m of BRT routes}, Rank high
			Scope have significant impact on spatial form	20%	Within the smallest key Spatial Structuring Elements (precincts) of the City	If {project} is within and{Precinct}, rank high
3	Require major infrastructure investment	20%	Size of budget	80%	Project is larger than the 75th percentile project asking for budget in that financial year.	
			Infrastructure	20%	Project Type - Infrastructure	
4	Require a blend of	15%	Mix of Funding sources	100%	If project is not Council funded	If {project} is {Co-Funded}, rank high

Theme	Weight	Criteria	Weight	Tshwane Measurable Indicator	Logic
finance where a mix of public funds is able to leverage private sector investment as well as unlock household investment				Or If project is co-funded	If {project} is {Council-Funded}, rank low
5 Require specific skills across a number of professions and have multiple stakeholders	5%	Number of Stakeholders	100%	Linked to a critical National Development Outcome, or A Municipal Strategic Pillar	

## 12.2 Catalytic Land Development Programme: Identification

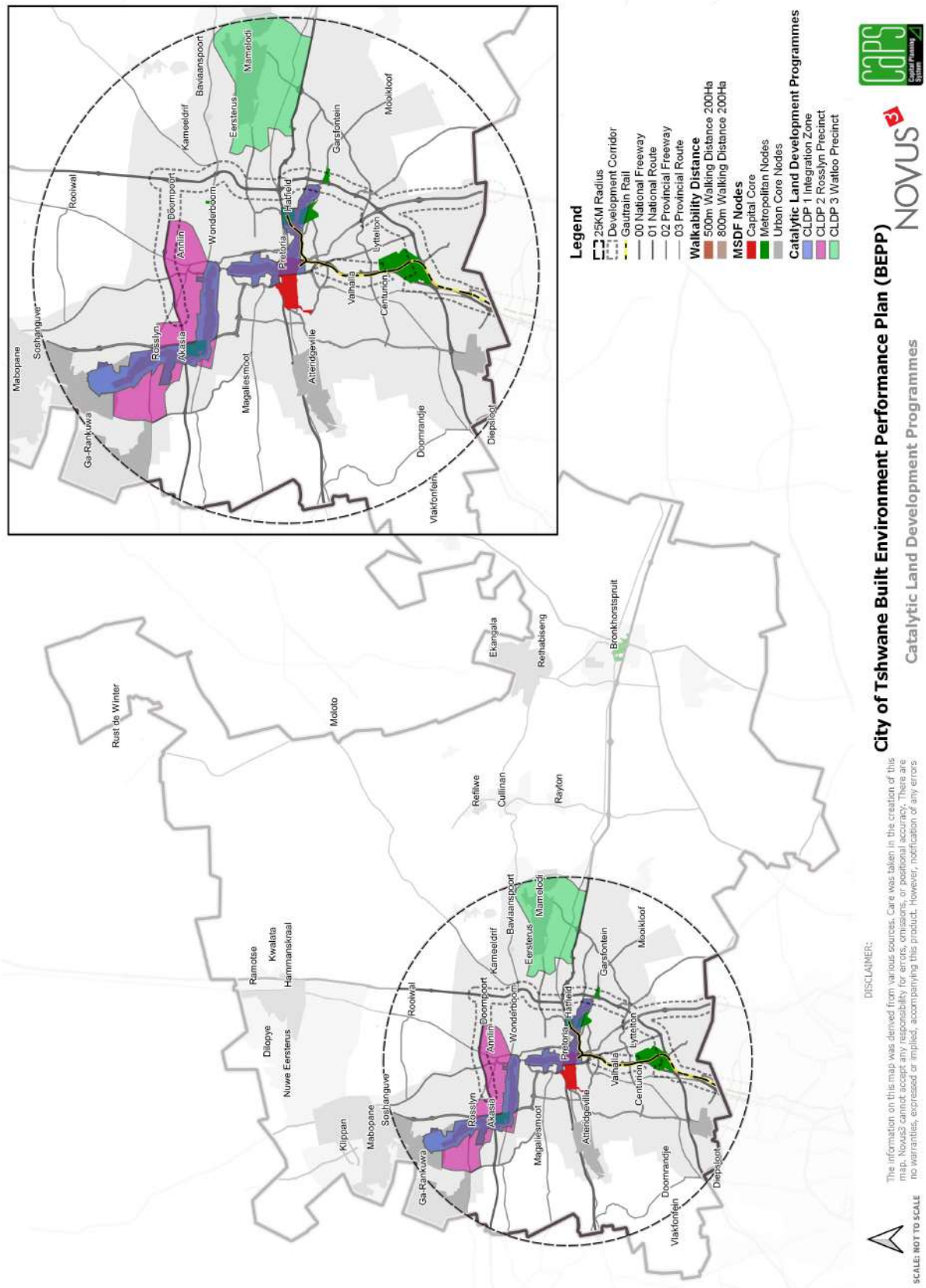
The city has identified three CLDP's, namely:

- CLDP 1 – Integration Zone
- CLDP 2 – Rosslyn / Wonderboom Precinct
- CLDP 3 – Watloo / Silverton Precinct

The Rosslyn/Wonderboom area is home to the TAC which has recently seen a large increase in public and private investment together with industrial and residential development. The CSU represents the city as part of the Automotive Industry Development Centre (AIDC), which also includes automotive manufactures within the region. The AIDC provides a platform within which the city has the opportunity to share best practices regarding the running of resource efficient manufacturing plants. This aligns with the city's strategic vision to be more resource efficient and resilient. The Tshwane Automotive City Development Framework (TACDF) outlines a large focus towards greening within the Rosslyn/Wonderboom area together with rehabilitation strategies aimed towards existing open spaces. The rehabilitation of open spaces and greening of areas will contribute significantly towards heat management measures.

Although the Waltloo/Silverton area does not directly from part of TAC, the principles applied to the Rosslyn/Wonderboom area through the AIDC platform applies to manufacturers across the city, and by implication those located in the Watloo/Silverton area.

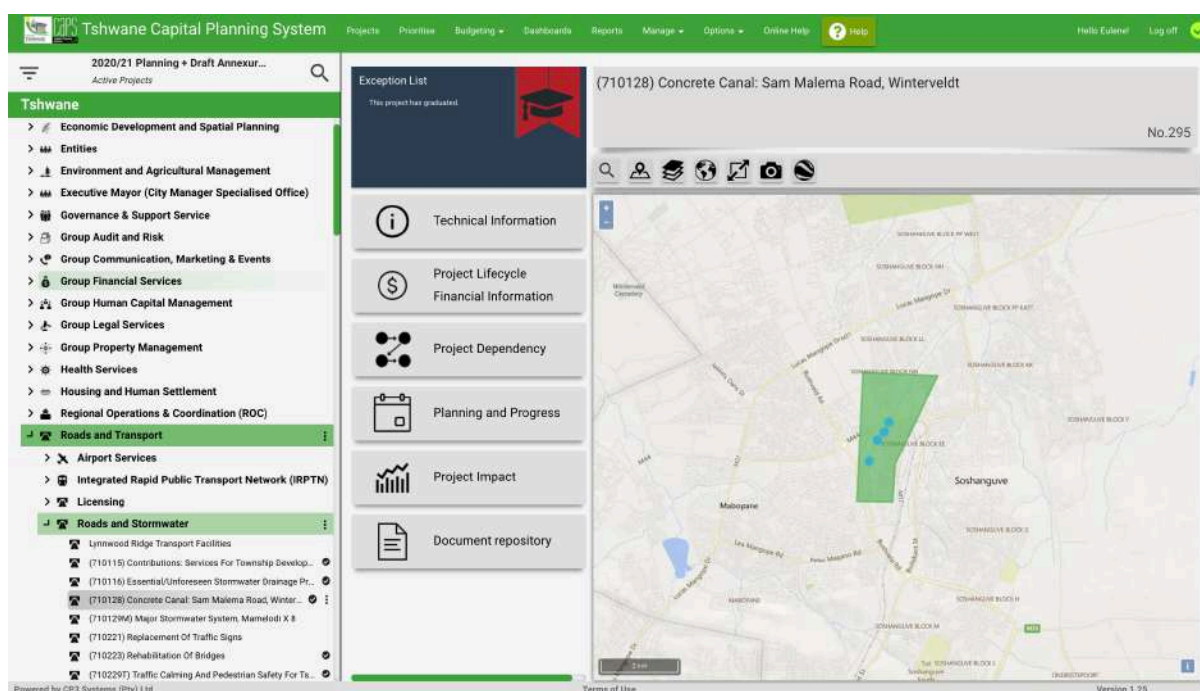
Figure 39 Catalytic Land Development Programmes



## 13 Project Preparation within the City of Tshwane

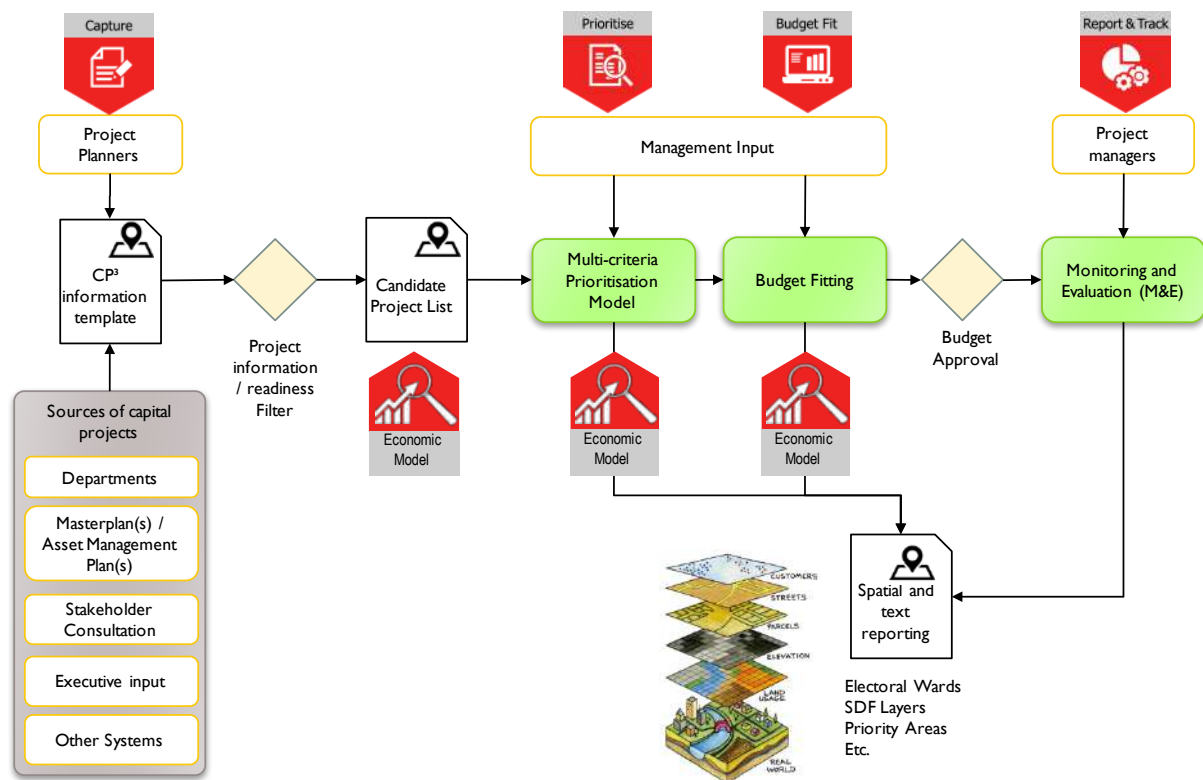
The City of Tshwane utilises a project preparation, planning and prioritisation information system (CAPS) to solicit medium-to-long term development plans and implementation strategies which give effect to the city's vision, metropolitan-, regional- and local Spatial Development Frameworks (SDFs) and precinct plans. In so doing, CAPS has been institutionalised as a centralised project database which contains all identified projects and enabling factors required to facilitate and support development (i.e. required bulk infrastructure, transport infrastructure, social amenities etc.). Project identification should identify capital needs or projects from the various master planning and IDP community engagement processes. Figure 40 shows system content from the CAPS system, and more specifically where capital projects are captured per unit or departmental cluster in accordance with the minimum project preparation requirements of the city.

Figure 40 City of Tshwane Capital Planning and Prioritisation Information System (CAPS)



As mentioned above, project preparation includes the capturing of a project wish-list onto CAPS. Capturing of the project wish-list occurs annually, during the city's capital budget planning and preparation process, and require departments to conform to a minimum set of project information criteria. The CAPS project information criteria conform to the MFMA Municipal Standard Chart of Accounts (mSCOA). Figure 41 outlines the project life-cycle process flow within the CAPS environment and indicates the process of identifying a project wish-list. The prioritisation part of the process flow will be discussed in Chapter 14, whereas the budget scenario preparation process will be discussed as in Chapter 18.

Figure 41 High Level Project Life-cycle Process Flow within CAPS

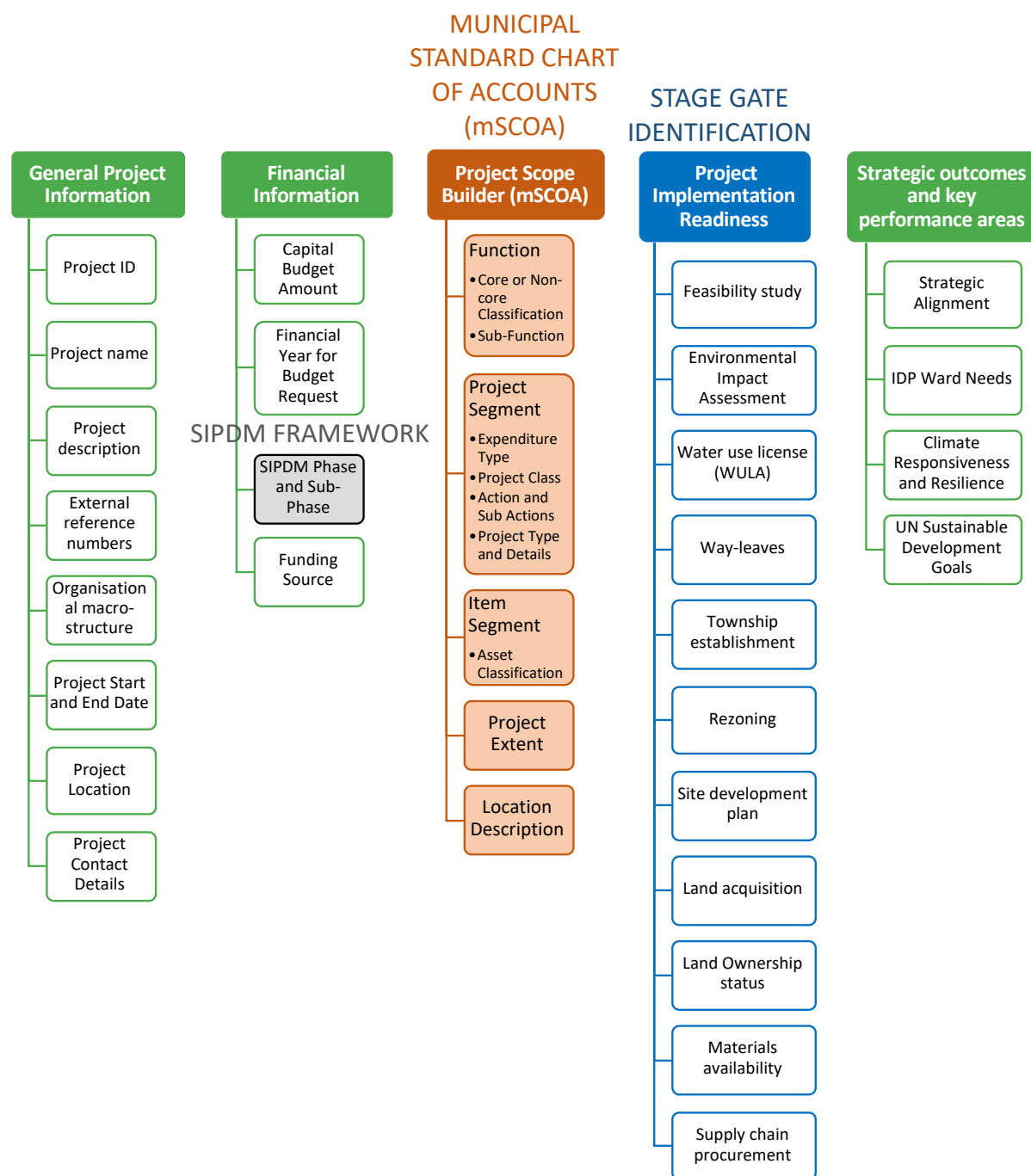


### 13.1 CAPS Minimum Project Information Requirements

Figure 42 below outlines the criteria and minimum information requirements for project capturing during the annual project planning and preparation process of the city.



Figure 42 CAPS Minimum Project Information Requirements



The items marked in grey indicates project information alignment to the FIPDM framework, whereas items marked in blue indicates the project information alignment to the city's Stage Gate standard and workflow process. For more information on the Stage Gate standard and workflow process refer to Chapter 21. Project information Items specifically aligned to mSCOA requirements have been marked in orange.

## 13.2 Evidence-based Project Preparation

The Framework for Infrastructure Procurement and Delivery Management (FIPDM), together with the Stage Gate standard and workflow process requires evidence-based programme or project planning. To allow for evidence-based planning and reporting, specific evidence items are required in order to establish the stage gate in which a project is captured onto CAPS. Through the use of evidence-based reporting and tracking, the city will be in a position to establish whether a programme or project should remain in the current gate or proceed onto the next gate. Chapter 21 outlines the City's approach to the adoption of an infrastructure implementation management process which aligns with National Treasury's FIPDM.

In addition to the information requirements as outlined in Figure 42, the project planning and capturing process (project preparation) require evidence-based documentation pertaining to certain aspects of each project or programme. Project preparation evidence associated with particular stage gates are uploaded onto the CAPS document management system. A typical portfolio of evidence could consist of the following supportive documentation:

- Technical Feasibility
  - Pre-feasibility study
  - Feasibility study
- Financial Feasibility
  - Cost estimate, bill of quantities etc.
  - Economic impact studies
- Implementation Readiness
  - Environmental Impact Assessment – Record of Decision (ROD) (if applicable)
  - Water Use Licence approvals (if applicable)
  - Way-leave approvals (if applicable)
  - Township establishment approvals (if applicable)
  - Rezoning approvals (if applicable)
  - Site development plan approvals (if applicable)
  - Materials availability - purchase orders
  - Supply chain / procurement – letter of appointment, contracts, service level agreements etc.

## 14 Capital Prioritisation Model (CPM)

The following section provides information and insight into the capital projects prioritisation process. This prioritisation process occurs annually prior to the subsequent budgeting process required by National Treasury. In conclusion to this section, the results of the CPM will be outlined and discussed.

The structure and content of the CPM is based on a high-level assessment for purposes of the BEPP. Since the publication and endorsement of the previous version of the Tshwane BEPP, changes were made to the structure of the CPM to inter-alia, incorporate elements such as climate change and strategic outcomes sought by the BEPP and National Policy documents. The changes that were made were based on the 2019 BEPP recommendations that were adopted by Council.

In addition to accommodating the previous BEPP's recommendations, changes were made to improve the spatial component of the model, to ensure that projects that are spatially targeting and aligning with the City's vision, are appropriately elevated in eminence relative to other projects that are not. The slightly tweaked and enhanced model is shown in Figure 43.

## **14.1 Purpose of the CPM**

The CPM of the City of Tshwane is a systematic and objective methodology that provides a way to sort a diverse set of capital needs or projects into an order of importance based on each capital need / project's alignment to the strategic, spatial, developmental, social, economic, environmental and financial objectives of the municipality. The CPM identifies each project's relative importance by deriving a numerical value representative of the project's priority.

The CPM provides a means for ranking capital needs based on criteria that are the most important, in order to meet the city's overarching developmental objectives and strategies. This process assists in promoting co-ordinated and aligned departmental planning and budgeting.

Project prioritisation can therefore be described as a process for assessing a project against a number of variables such as, economic, social, environmental, legislative and financial variables, in order to determine a capital project's alignment with or contribution to such variables. It provides for a systematic and objective assessment of an ongoing or completed project. All the impacts associated with a capital project are identified, and where possible, costs and benefits valued in monetary terms, so as to ensure that projects prioritised and selected for implementation by the city will provide the maximum net benefit to the community, economy and environment – the balancing effect.

It is important to note that this approach is a tool that assist the city to work through a myriad of capital needs on an annual basis with expediency and efficiency. Scenarios can be tested, and additional spatial realities can be incorporated with relative ease. The process allows for manual adjustments to be made by the City's executive, should the need arise – the process recognises that there may be, from time to time, issues that could not have been foreseen or reasonably be taken into account by the model. By and large though, the bulk of the 1000+ capital needs are processed to a state where officials can start making sense of the outcomes, and to test the veracity of the results by e.g. looking at the top-scoring and lower-scoring projects to test whether it "makes sense". Should there be discord about some of the outcomes, a meaningful discourse relating to the main themes of the prioritisation can ensue (e.g. the weight carried by socio-economic parameters, etc.) instead of debating the individual merits of a multitude of disparate projects.

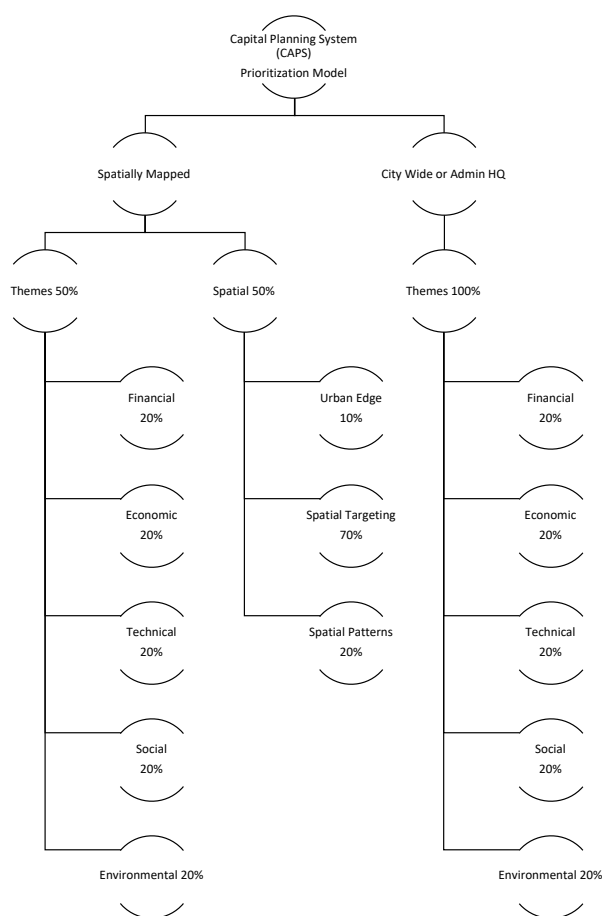
## **14.2 Capital Prioritisation Model Outline**

### **14.2.1 CPM High-level Structure**

The CPM structure allows for projects to be scored between two mutually exclusive branches (refer to Figure 43) namely:

- Spatially Mapped projects; and
- City Wide projects or projects relating to administrative headquarters (Admin HQ)

Figure 43 CPM High-Level Structure



These two model branches are mutually exclusive, which means that a project can only pass through one of the two branches and can never be scored on both branches. Projects which have spatial locations (i.e. geo-referenced works locations and beneficiary areas) are evaluated through the “Spatially Mapped” branch of the model, whereas unmapped projects marked under the MSCOA regional segment as “City Wide” or “Admin HQ” are evaluated through the “City Wide / Admin HQ” branch of the model. This distinction is made so that City Wide and Admin HQ projects are not substantially penalised under the “Spatial” branch of the prioritisation model – given that they cannot score on spatial measurement criteria.

Once it has been determined whether a project is spatially mapped or City Wide/Admin HQ, the project evaluation takes place according to the following themed categories:

- Financial
- Economic
- Technical
- Social
- Environmental

From the high-level tree structure above (refer to Figure 43) that the “Spatial alignment” theme is only utilised under the “Spatially Mapped” scorecard.

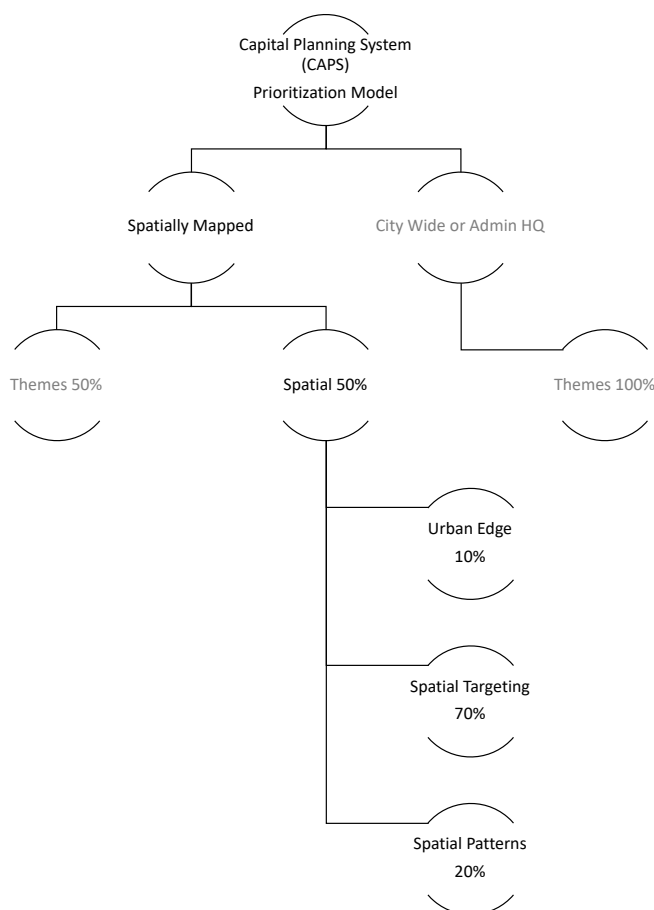
### 14.2.1.1 Spatial Criteria

The spatial alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the SDF and other spatial targeting objectives set out in various strategic documents of the municipality (i.e. IDP, RSDF, BEPP, CIF etc.). The alignment of projects to the spatial targeting areas of the municipality are scored according to the following criteria:

- Urban Edge
- Spatial Targeting
- Spatial Patterns

These criteria measured under these sub-branches seek to ensure that projects within the municipal budget align with the spatial structure or spatial development objectives of the municipality.

Figure 44 Spatial Criteria



### 14.2.1.2 Financial Criteria

The financial alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget are considered to be credible, affordable, funded, applied to expand the rateable asset base and improving the fiscal position of the municipality. The financial alignment score is calculated within five distinct categories, namely:

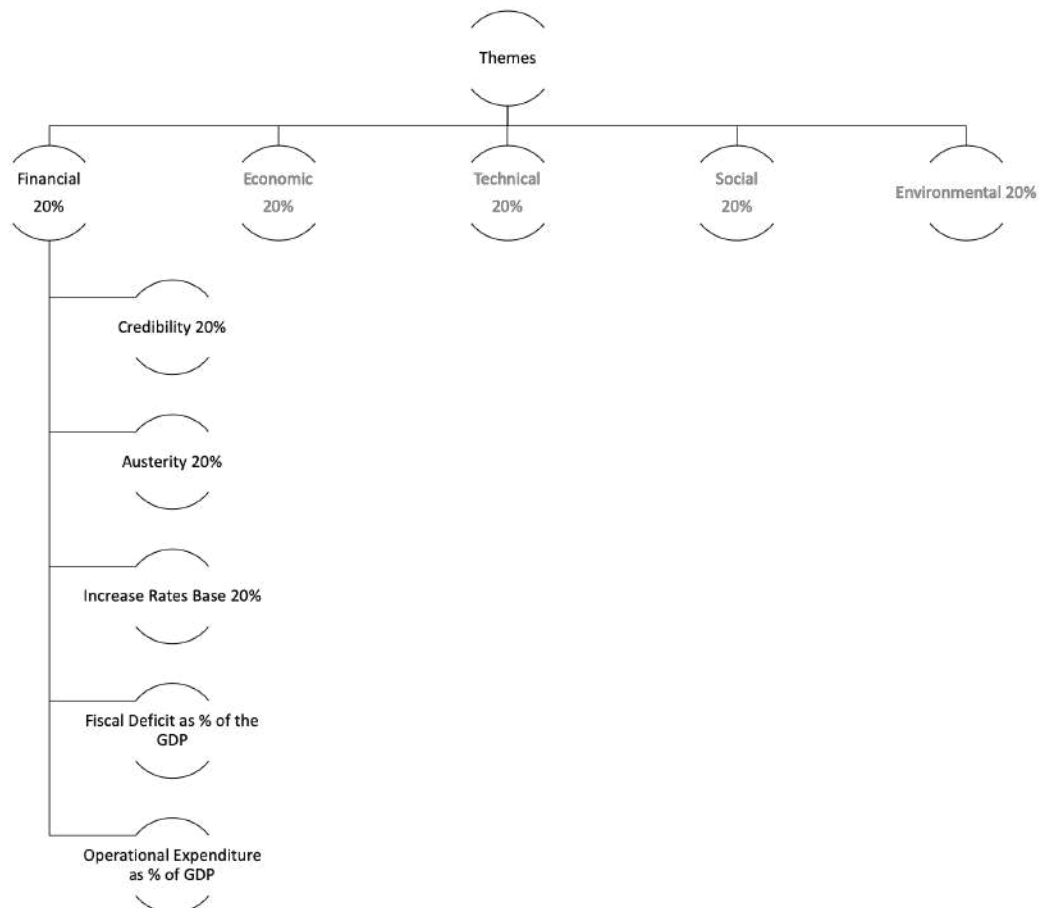
- Credibility



- Austerity
- Increased Rates Base
- Fiscal Deficit as a % of GDP
- Operational Expenditure as % of GDP

The structure of the financial alignment branch is displayed in below.

Figure 45 Financial Alignment within Themes



### 14.2.1.3 Economic Criteria

The economic alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget contributes to the growth of the municipal economy and improves the economic position of the residents within the municipality.

A macro-economic impact module (EIM) was developed for the municipality specifically to make use of the data from the CAPS system. The econometric model is specific for the municipality and draws from a sophisticated range of financial data, regional data, and population data sourced from Statistics South Africa. As such, the EIM generates values for the impact of individual and portfolio capital projects in terms of a set of economic, socio-economic and fiscal indicators – for the city as a whole, as well as a selection of key sub-regions or ‘main places’.

The EIM is based on the outputs of a comprehensive suite of econometric models. The workings of the EIM are dynamic and consider the indirect city-wide impacts of projects and programmes – not

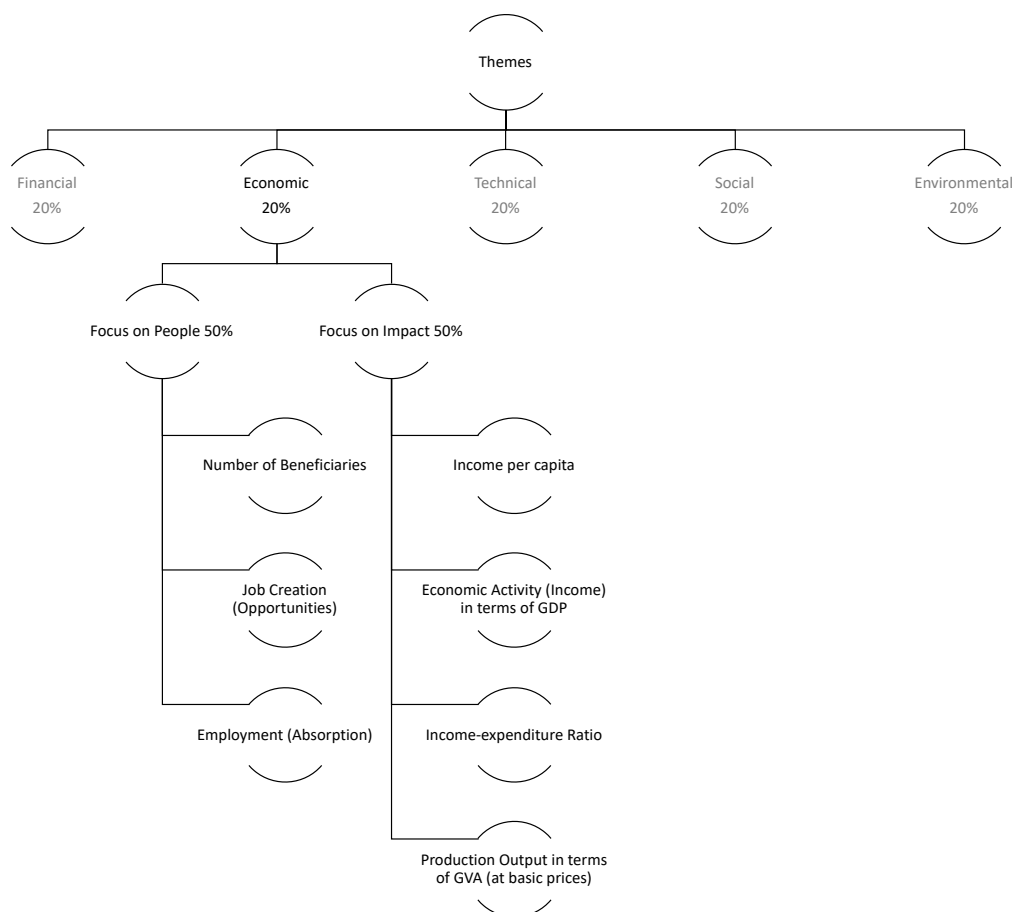
only the localised ward-specific impact. The EIM therefore captures the iterative, dynamic impacts of all of the role-players within the economy – households, business, government, foreign sector, as well as the full economic flow of goods, services, factors and money is accounted for, and an iterative computational process is utilised.

The outputs from the economic model is further augmented spatially by evaluating the alignment of the project's location and affected area, with geographic areas that were graded across the entire municipal area in terms of its economic impact in a separate economic study that was conducted for this purpose.

The economic alignment score is calculated within two distinct categories, namely (refer to Figure 46):

- Focus on impact
- Focus on people

Figure 46 Economic Alignment within Themes



#### 14.2.1.4 Technical Criteria

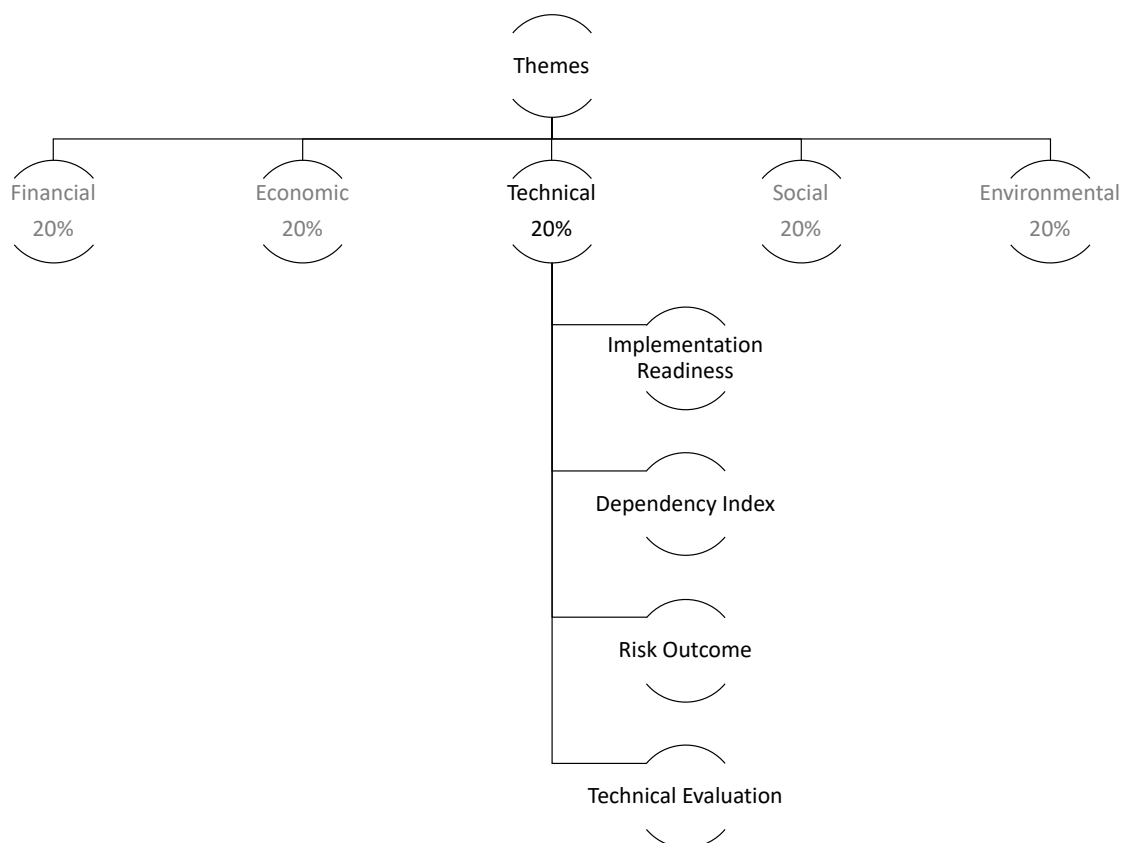
The technical alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the asset management plans, analysis and modelling of the technical or utility services departments. The technical alignment score is calculated using implementation readiness, dependency index, risk outcome and technical evaluation criteria.

The implementation readiness sub-branch is designed to measure a number of project readiness questions, which then determines the overall branch score on a project specific level. If a project is

ready to implement, the project will receive an elevated score. Alternatively, if project readiness information was not completed or indicates that a project is not ready for implementation owing to outstanding legislative, regulatory or procedural requirements, the project will be penalised with a lower branch score.

The structure of the technical alignment branch is displayed in Figure 47 below.

Figure 47 Technical Alignment within Themes

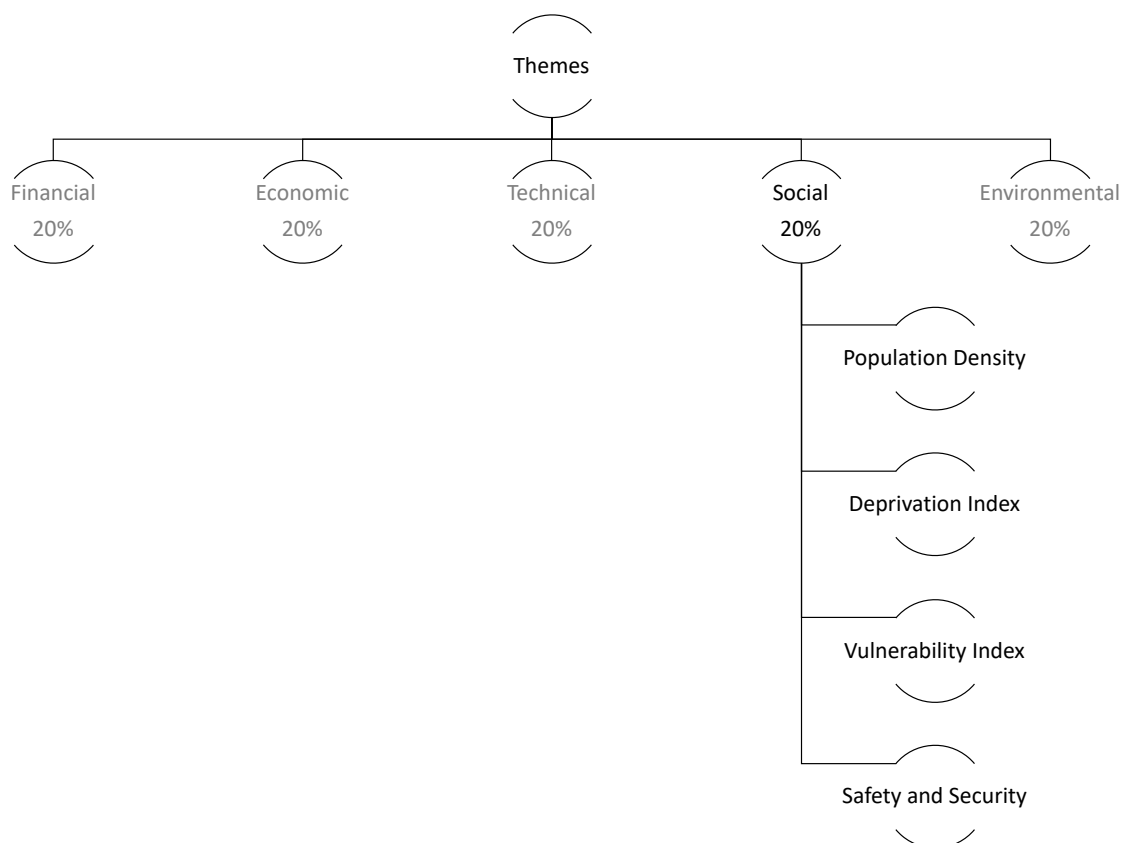


#### 14.2.1.5 Social Criteria

The social alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with servicing of areas with the highest demand and where the most vulnerable communities are situated and provides safety and security to the people within the city. The social alignment score is calculated within the following distinct categories, namely:

- Population Density
- Deprivation Index
- Vulnerability Index
- Safety and Security

Figure 48 Social Alignment within Themes



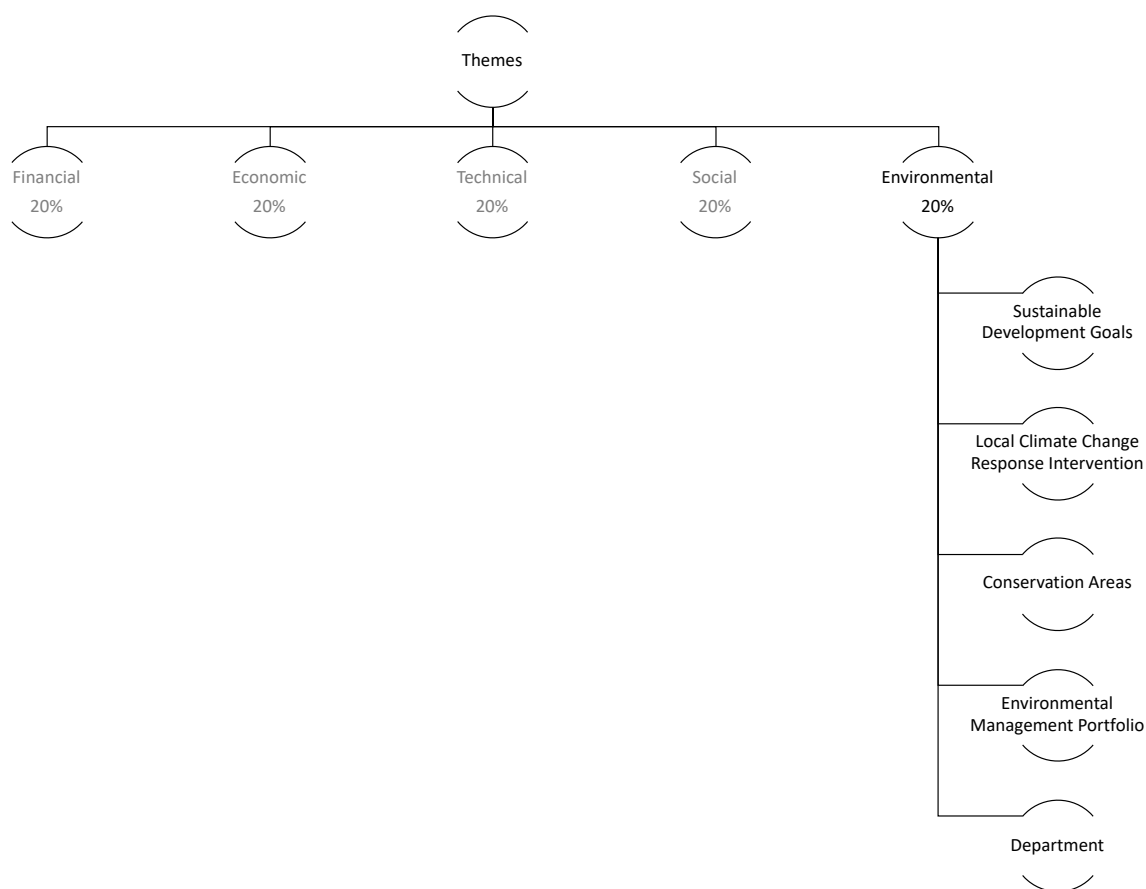
#### 14.2.1.6 Environmental Criteria

The environmental alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the protection of the environment, climate change strategies, conservation areas and sustainable development goals as set out by the city.

The environmental alignment score is calculated within five defined categories, namely (refer to Figure 49):

- Sustainable Development Goals
- Local Climate Change Response Interventions
- Conservation Areas
- Environmental Management Portfolio
- Departments

Figure 49 Environmental Alignment within Themes



### 14.3 Capital Prioritisation Model Results

The Capital Prioritisation Model (CPM) of the City is a systematic and objective methodology that provides a way to sort a diverse set of items/projects into an order of importance based on each project's alignment to the strategic, developmental, social, economic, environmental and financial objectives of the municipality. The CPM identifies each project's relative importance by deriving a numerical value, representative of the project's priority.

The prioritisation model outline was discussed as part of Chapter 14.2 and includes an overview of the CPM model. The following section shows an overview of the results from the CPM, which feeds into the budgeting process (refer to Chapter 18), and consequently provides a portfolio of projects for the 2020/21 Draft Annexure A (Chapter 19). The CPM was run using the following CaPS settings as input:

- Financial Baseline: 2020/21 Planning + Draft Annexure A (20200323)
- Applicable Financial Year: 2020/2021
- Prioritisation model name: 20190830\_Tshwane\_Model\_20-21\_v1
- Prioritisation model version: 2020-01-21

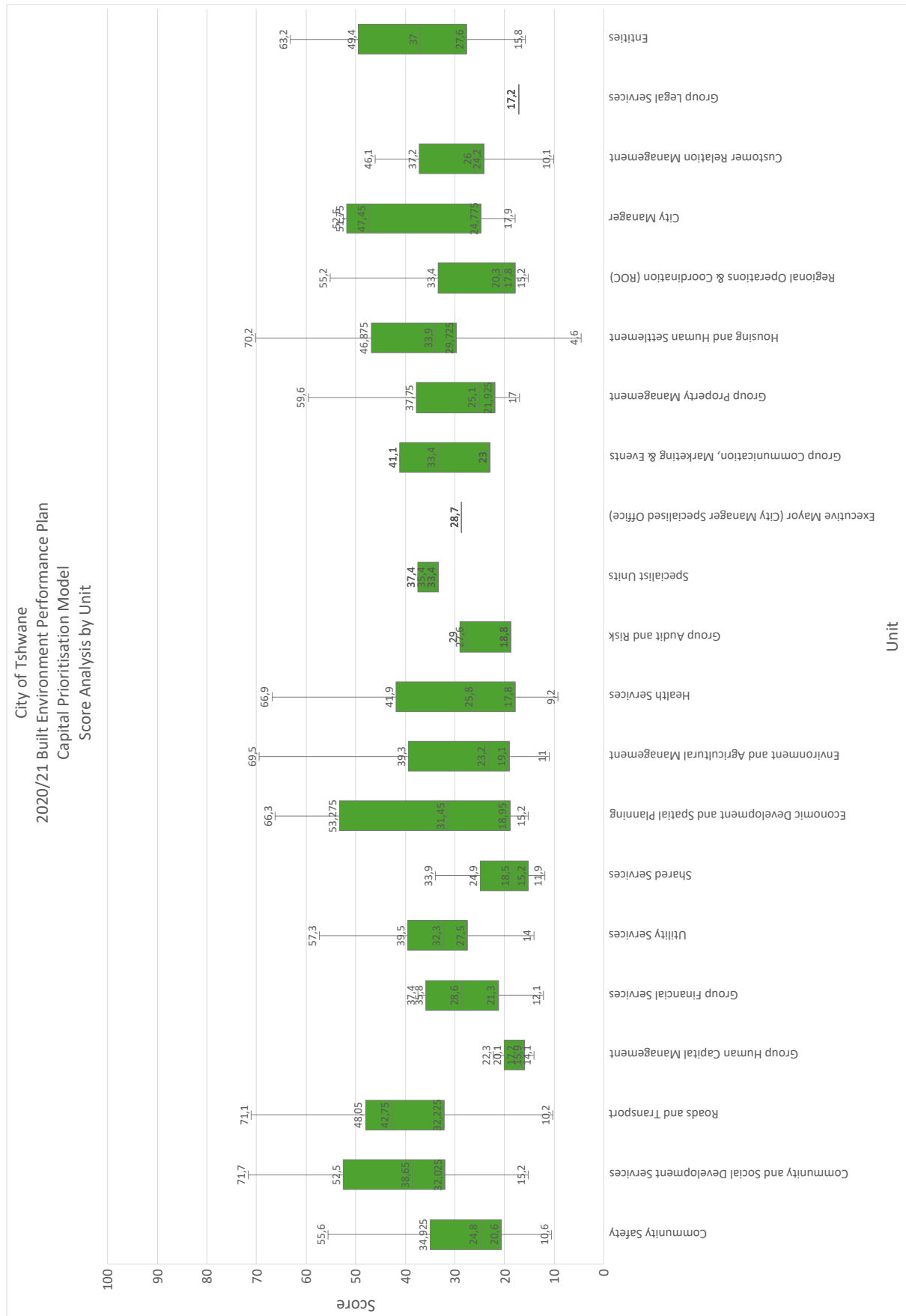
#### 14.3.1 Modelling Results per Unit

The CPM results per Unit, is shown in Figure 50 as a "box-and-whisker" diagram. The "box" component of the diagram shows where the projects that scored between the 25th and 75th



percentile, scored for each specific unit. The average score of the unit is marked on the graph by a “x”. The “ends” of the whiskers provide the maximum and minimum scores. Projects scoring between the minimum value and the 25th percentile are arranged along the bottom whisker, and projects scoring between the maximum value and the 75th percentile are arranged along the top whisker and the box.

Figure 50 Prioritisation Model Results - Score per Unit



The reason for showing projects in this way (Figure 50) is that it provides quick insight into the level of variability of scores within each department. Where there is a lot of “bunching” of scores, the reasons for this are investigated to ensure the accuracy of the model outcomes. It may for instance be, that the project scores are “bunching” at a specific unit because the particular official or officials simply copied the responses from one project to the next, and in so doing compromising the process. In such instances, the data is investigated, and the model is run again until there is confidence in the legitimacy of the model outcomes. This is a very important first step in the evaluation of modelling results.

### **14.3.2 Modelling Results per Department**

An appraisal of the averaged scores as shown in Figure 51 and Table 17, is done for the purpose of further verification of the modelling results. Departments within the City that focus on the provision of basic infrastructure and services, should preferably score better than the other departments – this should include the provision of housing.

The average score also serves as a warning system to highlight further investigation into departments with low average scores stemming from the model. One of the main reasons for low average scores can often be found in the fact that the projects that are evaluated, are simply devoid of any data that can be used for prioritisation – so the project may be a good project, but there simply isn’t any data populated on the system by that particular department to enable the system to score the project properly and fairly. Instances where this is the case is highlighted and communicated back to the applicable departments.

On the opposite end of the scale, some departmental averages may be very high in relation to other departments – this is often the case with smaller departments that may only have one or two projects asking for funding. It is much easier for a small number of projects to obtain a high average score than it is for larger infrastructure provision departments e.g. the Road and Stormwater Department.

Figure 51 Prioritisation model results – Score per department

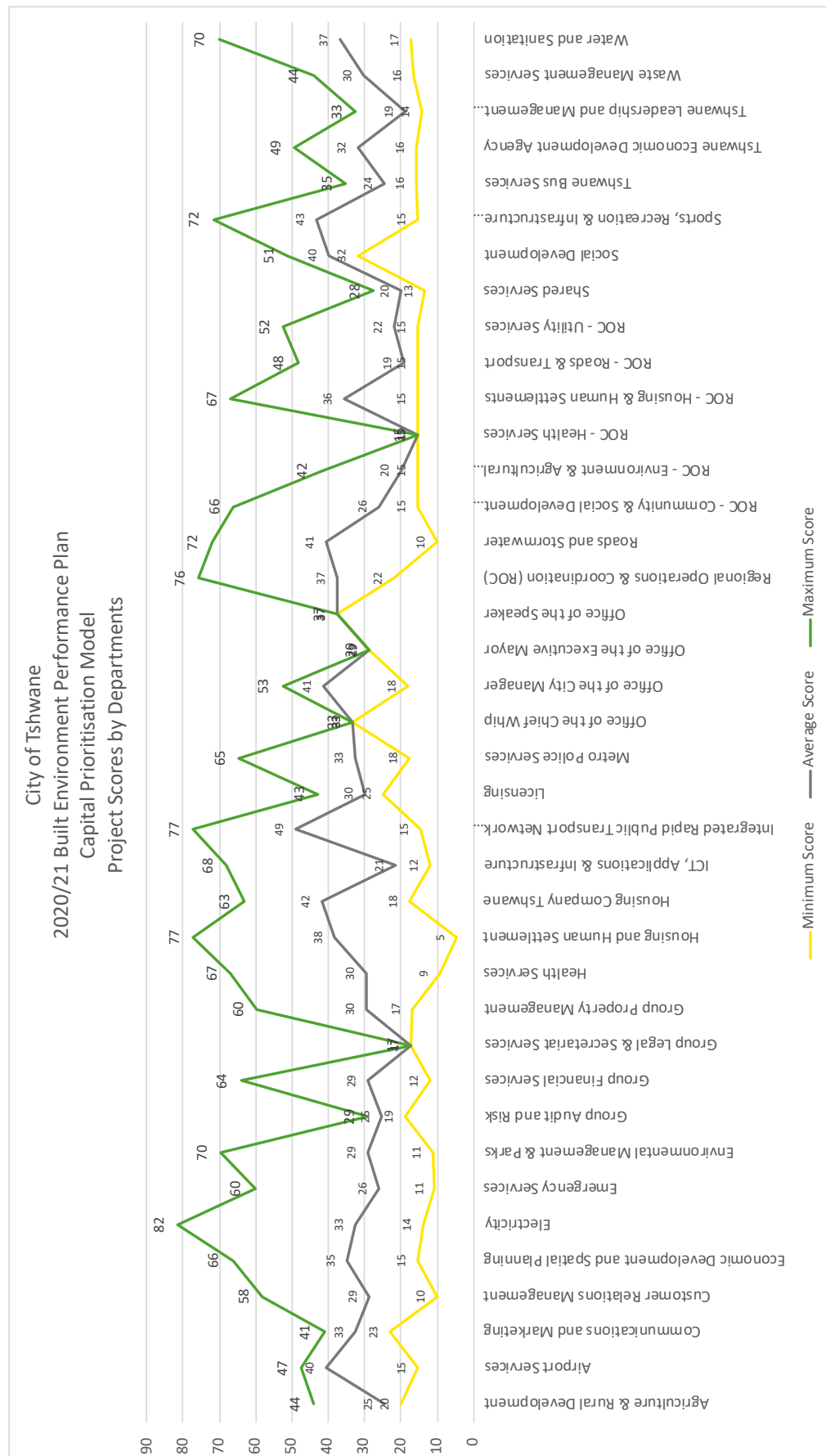


Table 17 Prioritisation model results – Score per department

Unit / Department	Minimum Score	Average Score	Maximum Score
Agriculture & Rural Development	19,9	24,6	43,9
Airport Services	15,2	40,4	47,4
Communications and Marketing	23,0	32,5	41,1
Customer Relations Management	10,1	28,9	58,1
Economic Development and Spatial Planning	15,2	35,0	66,3
Electricity	14,0	32,6	81,5
Emergency Services	10,6	26,0	60,2
Environmental Management & Parks	11,0	29,1	69,5
Group Audit and Risk	18,8	25,1	29,0
Group Financial Services	12,1	29,1	64,0
Group Legal & Secretariat Services	17,2	17,2	17,2
Group Property Management	17,0	29,7	59,6
Health Services	9,2	29,6	66,9
Housing and Human Settlement	4,6	38,3	77,3
Housing Company Tshwane	17,7	41,6	63,2
ICT, Applications & Infrastructure	11,9	21,5	68,1
Integrated Rapid Public Transport Network (IRPTN)	14,5	48,8	77,2
Licensing	25,1	30,0	42,8
Metro Police Services	17,7	32,7	64,6
Office of the Chief Whip	33,4	33,4	33,4
Office of the City Manager	17,9	41,3	52,5
Office of the Executive Mayor	28,7	28,7	28,7
Office of the Speaker	37,4	37,4	37,4
Regional Operations & Coordination (ROC)	22,0	37,5	75,8
Roads and Stormwater	10,2	40,5	72,1
ROC - Community & Social Development Services	15,2	26,1	66,1
ROC - Environment & Agricultural Management	15,2	19,8	41,8
ROC - Health Services	15,2	15,2	15,2
ROC - Housing & Human Settlements	15,2	35,6	66,8
ROC - Roads & Transport	15,2	19,3	48,4
ROC - Utility Services	15,2	22,1	52,4
Shared Services	13,4	20,0	27,5
Social Development	31,7	39,7	51,2
Sports, Recreation & Infrastructure Development	15,2	43,4	71,7
Tshwane Bus Services	15,6	24,4	35,2
Tshwane Economic Development Agency	15,8	31,9	49,4
Tshwane Leadership and Management Academy	14,1	18,8	32,6
Waste Management Services	16,4	30,2	44,2

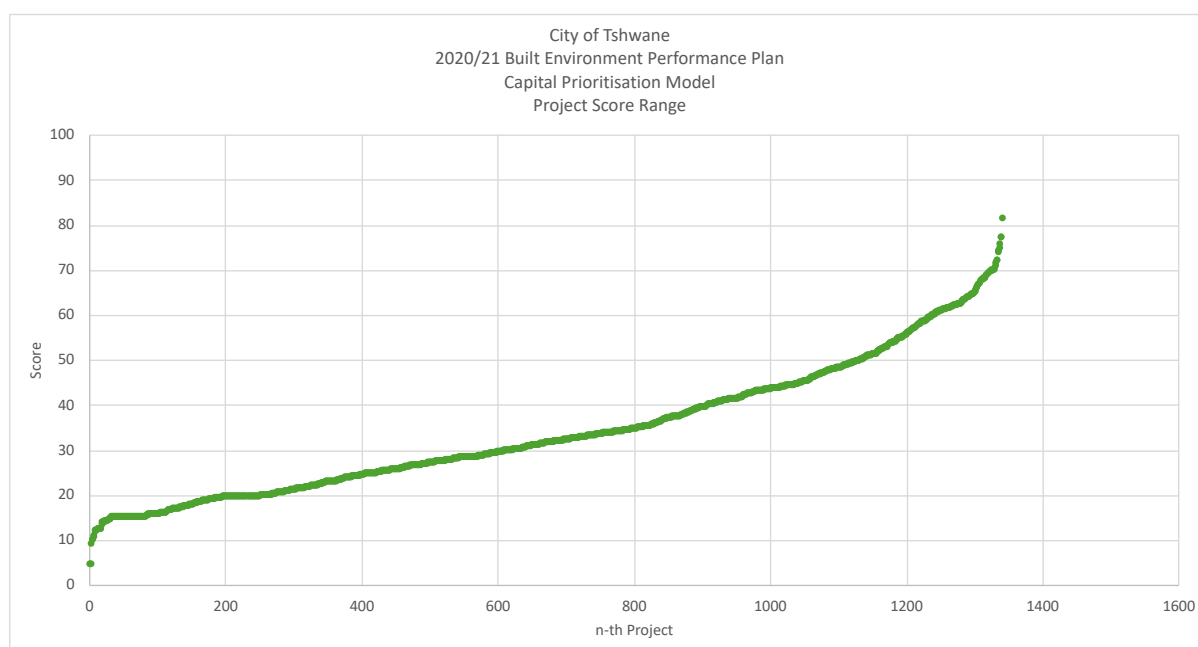


Unit / Department	Minimum Score	Average Score	Maximum Score
Water and Sanitation	17,2	36,9	70,2
<b>Grand Total</b>	<b>4,6</b>	<b>34,3</b>	<b>81,5</b>

In other instances, a low or high average score can simply imply that the projects typically stemming from that department align best with the strategic priorities of the City. The lowest and highest scoring projects for each department are interesting but statistically insignificant, because these scores only relate to one single project stemming from that particular department – that score is therefore not representative of the typical scores from that department and may simply be an outlier. It does however assist in comprehending the total span of project scores that was obtained from the modelling process.

The average scores as presented in Figure 52 are in line with the priorities of the city and with indicative budgets that were tabled in preceding years. This findings of this in the appraisal of the modelling results are therefore satisfactory and do not raise any red flags.

Figure 52 Project Score Distribution



A second methodology of testing the legitimacy of the results is by appraising the overall statistical distribution of the results as shown in Figure 52. The S-curve distribution is a typical “normal distribution” of results. A typical normal distribution is preferred as this is an indication of a well-balanced and thoroughly calibrated model. Bunching or skewness in the normal distribution would have been indicative of an undue bias or imbalance in the modelling criteria.

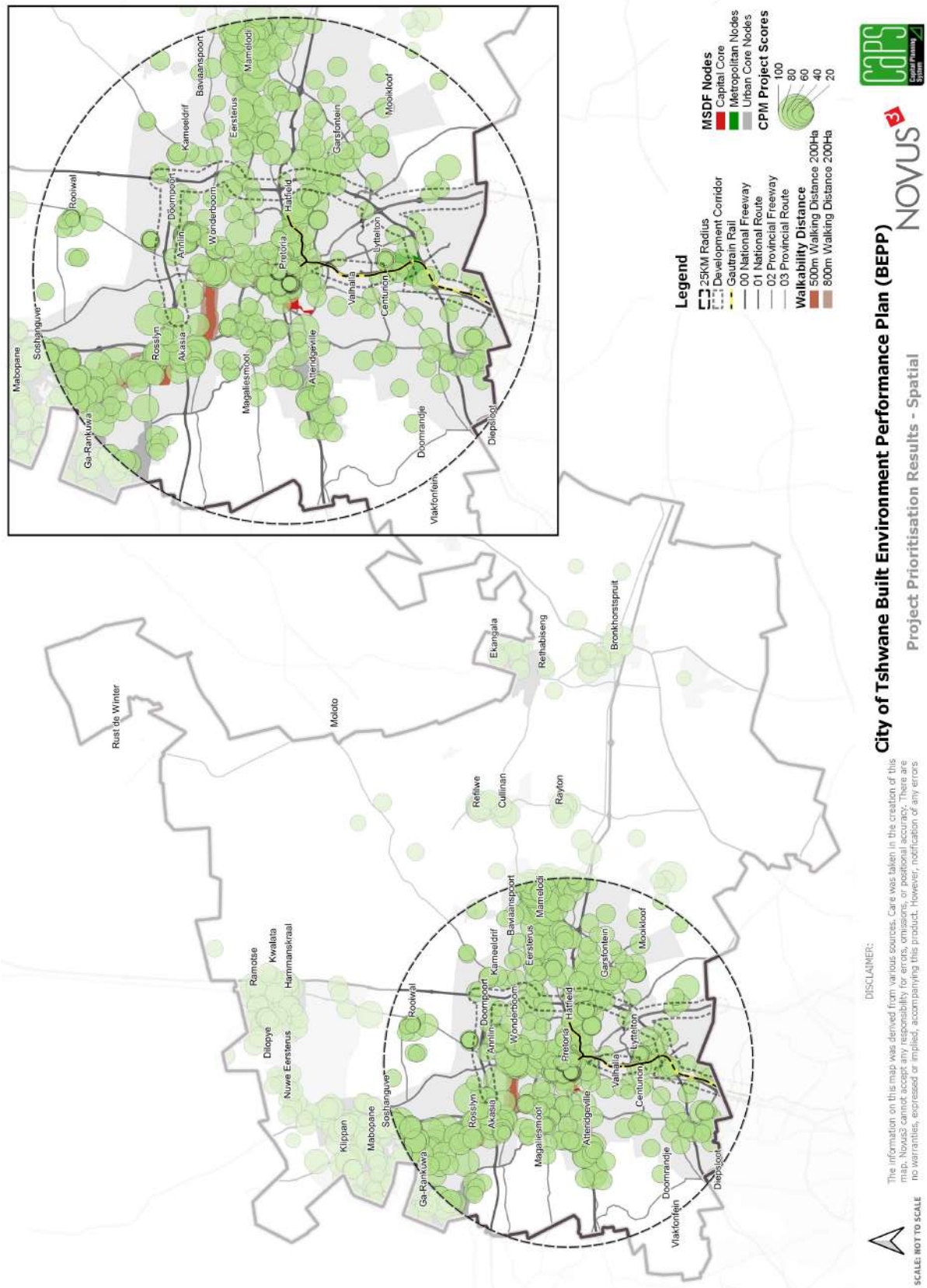
### 14.3.3 Spatial Distribution of Modelling Results

One of the key benefits of the Tshwane prioritisation model is that it enables the use of alphanumeric, numeric and spatial data as inputs – this aligns with legislative requirements as provided in Section B of this report. Spatial targeting is therefore a fundamental input into the modelling process and the priority of certain spatial areas can be tweaked until the outcomes of the model represents the city’s priorities optimally.

Each dot shown in Figure 53 represents a project – the size of the dot is an indication of how much the project has scored (range of scores is between 0 and 100). Considering the spatial parameters that

were included in the prioritisation model, it is not surprising to see that projects within the Spatial Transformation Zones scored higher in comparison to projects outside these areas (Figure 53). Furthermore, all areas that are considered to be at the forefront of the pro-poor agenda, did exceptionally well overall.

Figure 53 Project Prioritisation Results – Spatial



## 15 Intergovernmental Project Pipeline

The 2018/19 BEPP guidelines require municipalities to identify inter-governmental (IGR) pipeline projects and programmes which correspond to spatially targeted areas. The following section details the spatial alignment between the provincial and municipal spatial development framework, with the aim of identifying provincial capital focus areas and corresponding spatial transformation areas as outlined in Section B.

### 15.1 Provincial Planning

Gauteng Provincial Government (GPG) acknowledges spatial targeting as an effective planning mechanism and acknowledges that government on its own cannot solve all spatial challenges in every place at the same time due to resource and financial constraints. Therefore, government must prioritise and, as part of that prioritisation, discover which levers can be used to maximise impact.

GSDP 2030 implementation introduces “focus areas” to direct, guide, align, coordinate and harmonise all public social and infrastructure investment and development spending in the province, in accordance with a spatial development logic built on ensuring rapid, sustainable and inclusive provincial economic growth, township redevelopment and decisive spatial transformation. As these focus areas coincide with other national and municipal nodes, they present an opportunity for crowding-in investments in a coordinated manner, as well as guide investors on where and in what to invest, therefore signalling certainty and clarity about the provincial spatial focus.

The GSDP’s position is that setting priorities, allocating resources and implementation programmes will require better alignment of strategic development priorities in all planning and budgeting processes; a shared agreement on the nature and characteristics of the Gauteng space economy; and most importantly, a spatial logic for ordering development spending.

#### 15.1.1 Area of Focus for Economic Consolidation

These areas represent the anchors of the provincial, and by implication, the national economy. Drawing on economic growth trends over the past two decades, the areas are delineated based on their contributions to provincial economy, and their relative accessibility and connectivity to the rest of the province. The areas also contain a sizeable number of income-poor households.

As the core of the current provincial spatial form, the sustained growth of these areas is imperative for the well-being of the entire province. Government and the private sector need to adopt a thoroughly coordinated and collaborative approach when investing in these areas. Provincial government must intensify support for the area through providing convenient affordable public transport infrastructure and enhancing safety and security.

Municipalities must leverage long-term infrastructure planning, and maintenance, as well as progressive land-use policies to make these areas work. In line with this, municipalities must guide private sector development in providing higher residential densities, diverse mix of land-uses and opportunities for a wider mix of people of various income and social groups. To accomplish this, innovative and stronger collaboration between engineering and urban design professionals in the making of the built environment is imperative.

**City of Tshwane Built Environment Performance Plan (BEPP)**  
**Gauteng SDF: Area of Focus - Economic Consolidation**

**Legend**

- 25KM Radius
- Development Corridor
- Gautrain Rail
- 00 National Freeway
- 01 National Route
- 02 Provincial Freeway
- 03 Provincial Route
- Economic Consolidation
- Walkability Distance 200Ha
- 500m Walking Distance 200Ha
- 800m Walking Distance 200Ha
- MSDF Nodes
- Capital Core
- Metropolitan Nodes
- Urban Core Nodes

**DISCLAIMER:**

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**NOVUS3**  
**Capital Priority**

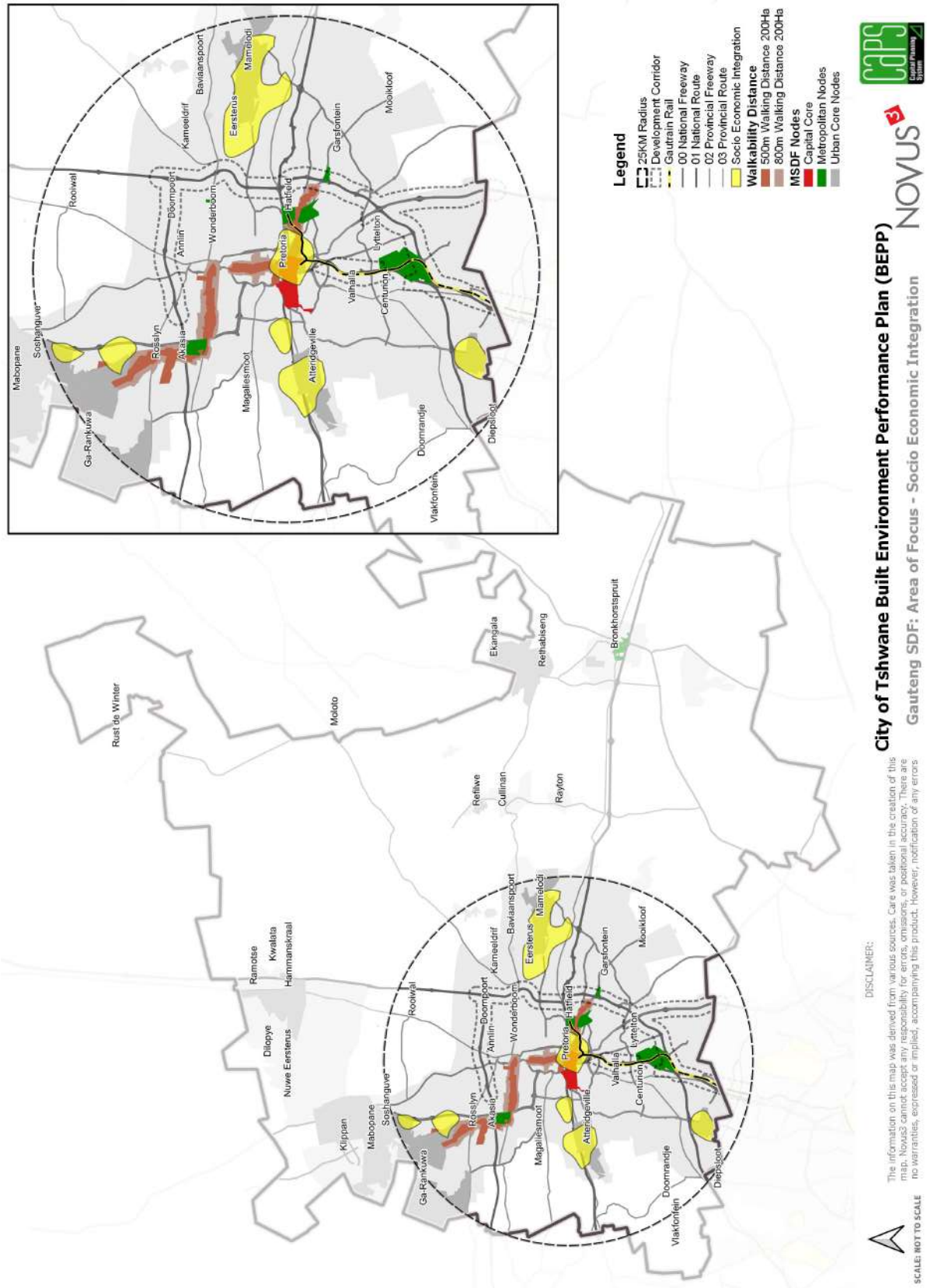


### **15.1.2 Area of Focus for Socio-Economic Integration**

The objective is to determine which locations offer Gauteng the most opportunity for socio-economic integration. These areas include parts of the province that have high levels of unemployment and poverty, and high dependency ratios, but are close to the provincial core economic areas. Spatial analyses of socio-economic, demographic and accessibility data was used to delineate the areas. These areas offer the highest prospect for social and economic integration on a provincial scale because of their high population densities and relative connectedness with the provincial economic core. Public investment needs to be targeted at these areas over a sustained period of time, together with incentives and a supportive regulatory framework that encourages the crowding-in of private sector investment. Provincial government must focus on developing health and education infrastructure development, building capacity, developing skills, and developing initiatives aimed at youth and women.

Transport infrastructure must be maintained, and public transport infrastructure extended to these areas. Municipalities should equally prioritise long-term bulk infrastructure planning and maintenance for these areas. The private sector should be encouraged to focus on place-making efforts in these areas, through innovative urban design making the area attractive for people from the wider provincial area. Higher residential densities and a diverse mix of land-uses and opportunities for a broader mix of people of various income and social groups should be encouraged.

Figure 55 Gauteng SDF: Area of Focus – Socio Economic Integration



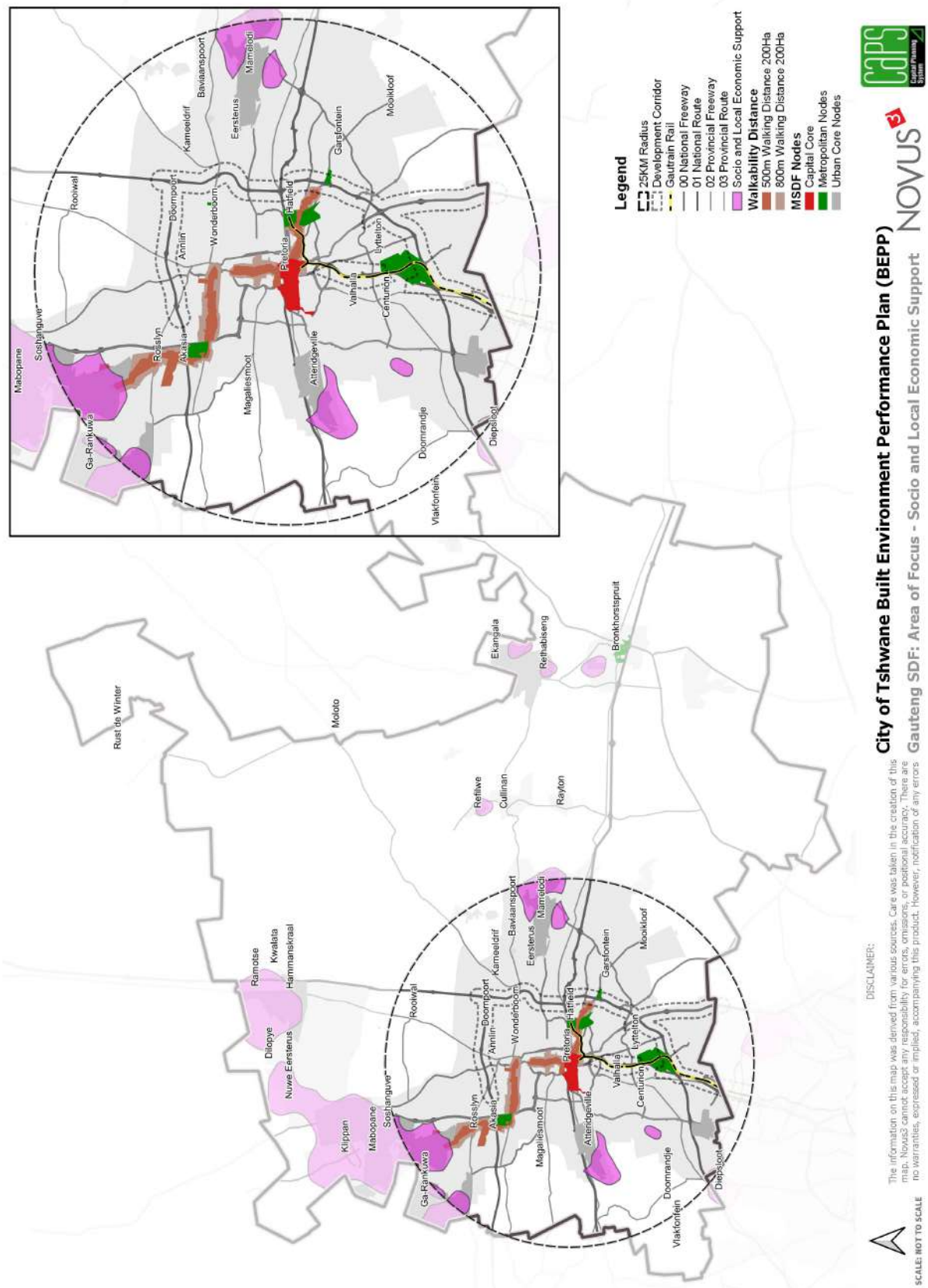
### **15.1.3 Area of Focus for Social and Local Economic Support**

The objective is to determine which locations in Gauteng require targeted social and local economic support. These areas include parts of the province that have high levels of unemployment and poverty and high dependency ratios but are comparatively poorly integrated with the province's socio-economic prosperity. Long-term integration of these areas with adjacent economic-consolidation focus areas is crucial. All three spheres of government need to coordinate their localised interventions over the medium to long term in order to lay a foundation for economic redevelopment and transformation.

Provincial government should focus on early childhood development, basic health care, quality primary and secondary education, community-based research and planning, sports infrastructure development, skills development, food security initiatives, sustainable livelihood initiatives, substance abuse prevention, treatment and rehabilitation, as well crime prevention and support. Provincial government should also support and nurture emerging local transport businesses in these areas.

Municipalities should review old inhibitive by-laws and ensure responsive land release to support local economic development. However, municipalities should cautiously manage settlement expansion in these areas and ensure place-making from the outset, through innovative urban design, to lay a foundation that will enable these areas to grow in a sustainable fashion over the longer term.

Figure 56 Gauteng SDF: Area of Focus – Socio and local economic Support



#### **15.1.4 Area of Focus for Economic Prosperity**

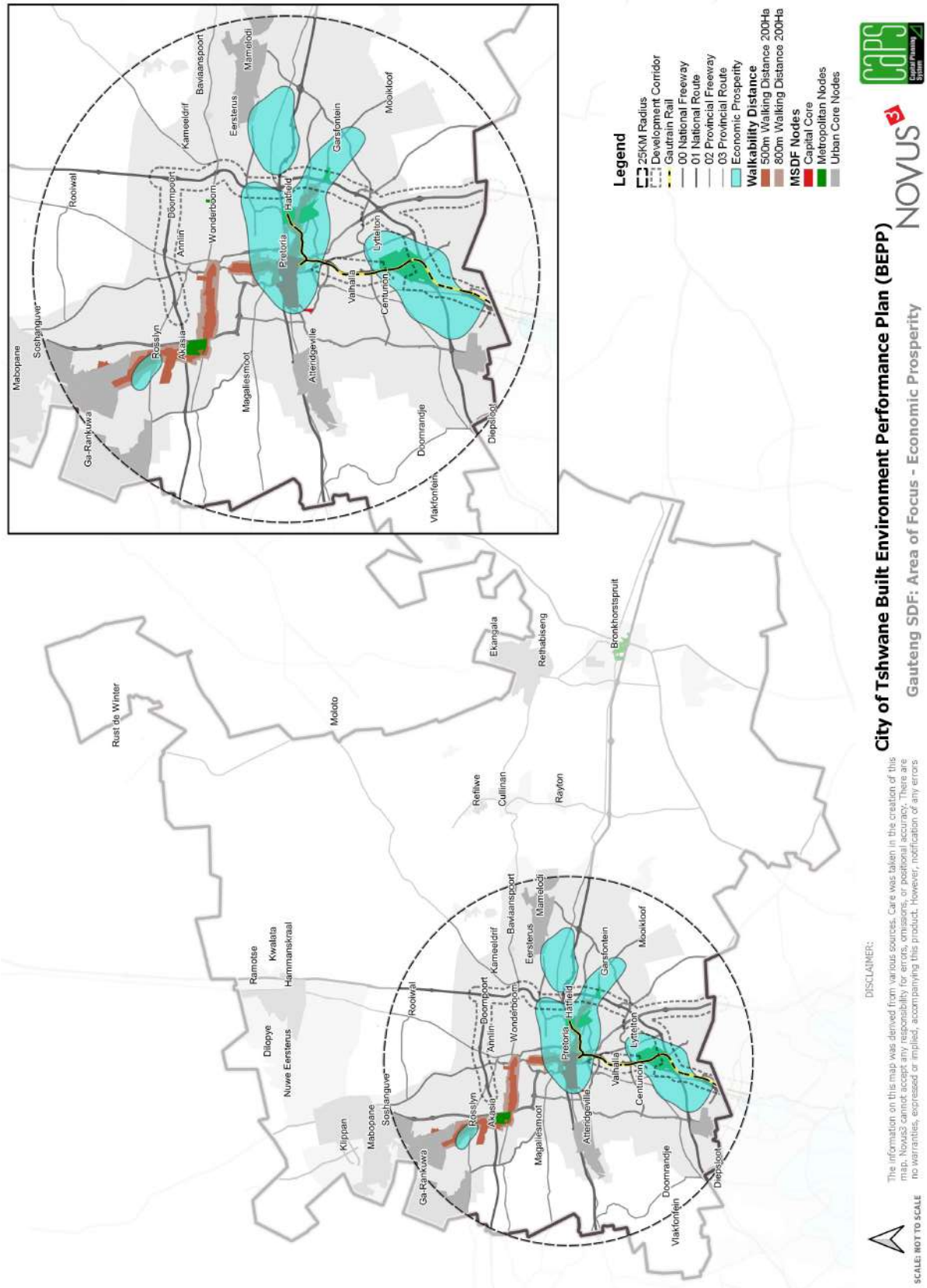
The objective is to determine which locations offer Gauteng the best opportunity for shared economic prosperity. These areas represent the anchors of the provincial, and by implication national economy. Drawing on economic growth trends over the past two decades, the areas are delineated based on their contributions to provincial economy, and their relative accessibility and connectivity to the rest of the province. The areas also contain a sizeable number of income-poor households. As the core of the current provincial spatial form, the sustained growth of these areas is imperative for the wellbeing of the entire province.

Government and the private sector need to adopt a thoroughly coordinated and collaborative approach when investing in these areas. Provincial government must intensify support for the area through providing convenient affordable public transport infrastructure and enhancing safety and security.

Municipalities must leverage long-term infrastructure planning, and maintenance, as well as progressive land-use policies to make these areas work. In line with this, municipalities must guide private sector development in providing higher residential densities, diverse mix of land-uses and opportunities for a wider mix of people of various income and social groups. To accomplish this, innovative and stronger collaboration between engineering and urban design professionals in the making of the built environment is imperative.



Figure 57 Gauteng SDF: Area of Focus – Economic Prosperity



## 15.2 Provincial and Municipal Planning Alignment

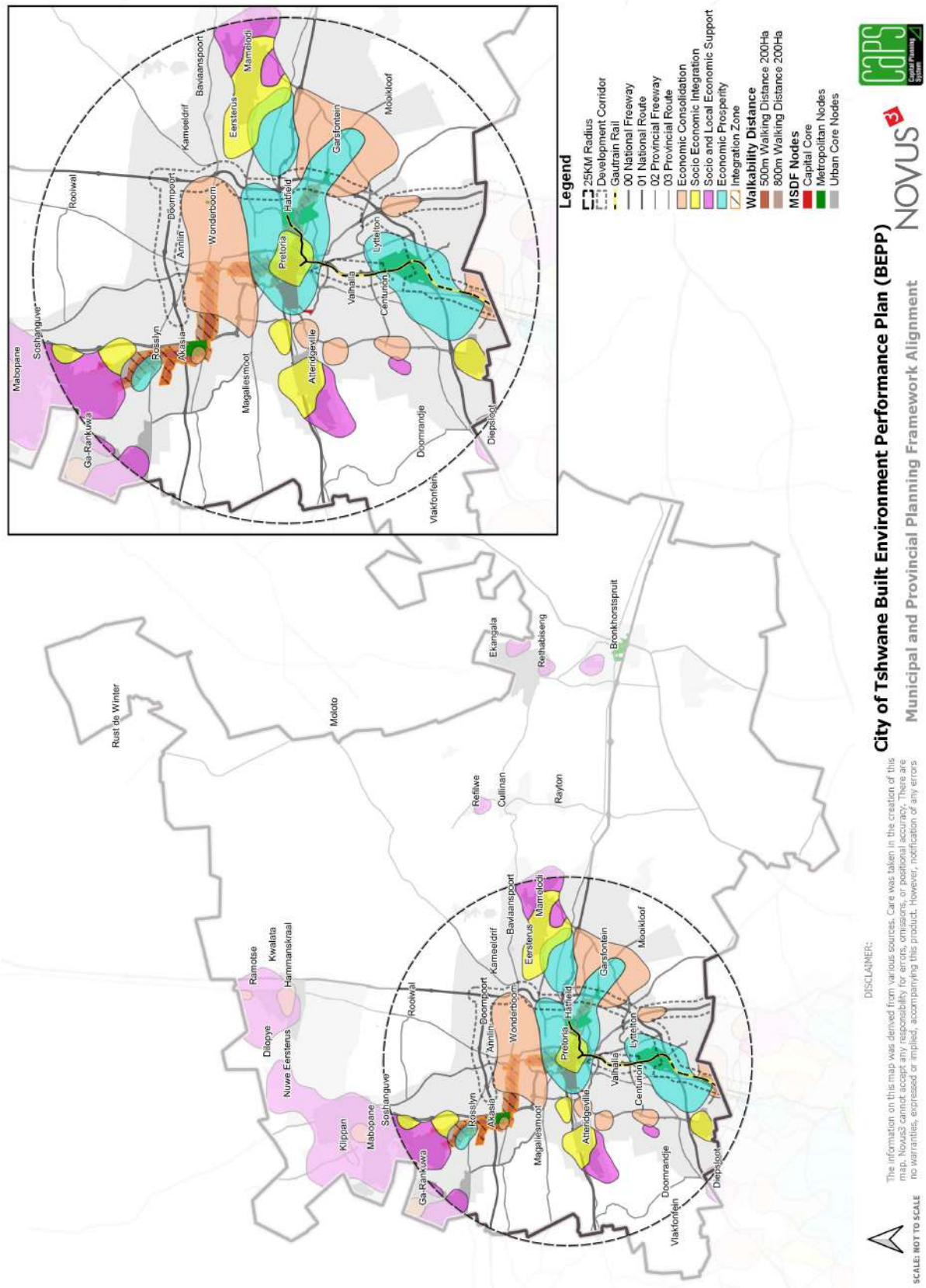
Chapters 15.1.1 - 15.1.4 outlined a detailed description of the four (4) areas of focus as identified within the GSDF 2030. The establishment of these focus areas have been based on municipal SDFs within Gauteng, and indicates similar objectives in terms of:

- (1) Promoting densification within specific areas;
- (2) Establishing an integrated open space network;
- (3) Integrating economically disadvantaged communities into the urban space;
- (4) Supporting viable public transport systems, and;
- (5) The establishment of a hierarchy of nodes which support existing development nodes and emerging nodes.

Section B of this document outlined the identification of spatially transformation areas, based on the city's MSDF and Integration Zones. Given that the GSDF 2030 identifies the importance of existing spatially targeted areas on a municipal level, the areas of focus suggest a strong alignment and inclusion of the nodes and corridors outlined in the MSDF together with the resultant CLDPs. Figure 58 below illustrates the alignment between municipal and provincial spatially targeted areas, which include the following:

- The capital core coincides with both the GSDF area of focus for socio-economic integration and economic prosperity.
- The Rosslyn precinct coincides with both the GSDF focus area for economic prosperity and economic consolidation.
- The Waltloo precinct coincides with three (3) GSDF focus areas namely:
  - (1) Economic prosperity;
  - (2) Social and local economic support, and;
  - (3) Socio-economic integration.

Figure 58 Municipal and Provincial Planning Framework Alignment



## 16 Institutional Arrangement

### 16.1 Project Preparation

The City utilises a project preparation, planning and prioritisation information system (CAPS) as outlined in Section A and Chapter 13 above. During this process the City uses CaPS to collect capital project demand but also to facilitate project planning in line with the annual IDP and budgeting process. After capital demand has been captured onto CaPS, the City applies the CPM to prioritise capital demand for purposes of the budget scenario process outlined in Section D.

The establishment of the CaPS TTT and the BEPPSCO (refer to Section A) has significantly benefited the process of project preparation through the establishment of a management and quality control framework. Details pertaining to this has been included in Section H as part of the Detailed Work Plan.

The work plan includes intermediation points within the process of preparing project information and is facilitated through the CaPS TTT, who further communicates outcomes through the BEPPSCO. The below indicates the intermediation points to the project preparation process:

- **CaPS TTT Capturing Seasons and Communications:** During the 2020/21 budgeting process the CaPS TTT communicated three capturing seasons. Each capturing season allows departments to capture their capital demand project list and technical information on CaPS (in line with the requirements set out in Chapter 13). The timelines associated for each capturing season was managed through the CaPS TTT in order to allow for a review of the information after capturing. The three capturing seasons also allow for new projects to be captured based on outcomes from municipal strategic planning sessions as per the IDP process plan. Addendum 6 includes the capturing memorandum for season one, the project information requirements and the subsequent communications for capturing seasons two and three.
- **CaPS TTT Training:** The CaPS TTT conducted training during the course of the 2020/21 budgeting cycle to prepare departments for each of the capturing seasons mentioned above. The objective of these training sessions was to prepare departments with an understanding of the project information requirements and the CaPS system. Addendum 6 includes the training session communications and attendance registers.
- **CaPS TTT Project Information Completeness Review:** After each of the capturing seasons the CaPS TTT analysed the information captured. The analysis of project information completeness assisted the CaPS TTT to identify information gaps and to communicate this to departments for attention during subsequent capturing seasons. The communication and analysis of each capturing season has been included in Addendum 6. For specific reference to the CaPS TTT planning meetings and agenda items refer to Addendum 2 (Section A).
- **CaPS TTT Project Sign-off Process:** Once the CaPS TTT has reviewed and communicated the status of project information completion, a formal sign-off process is followed. The project sign-off process includes the communication of a sign-off document to departmental heads for acknowledgement/agreement of project related information which was captured on CaPS during each of the capturing seasons. Addendum 6 outlines the project sign-off document and communication sent out during the 2020/21 budgeting process.

- BEPPSCO Communication: The BEPPSCO platform was used by the CaPS TTT to communicate the outcome of the above-mentioned intermediation points. Refer to Addendum 2 (Section A) which outlines the agenda items and outcomes for each BEPPSCO workshop held during the 2020/21 budgeting cycle.

The above intermediation points have been included in the detailed work plan as actions and milestones during the budgeting process. Refer to the work plan (Section H) for information relating to the timeline for each capturing season together with the preparatory actions and control processes put in place for the CaPS TTT and BEPPSCO.

## **16.2 Capital Prioritisation Model**

During the 2019/20 budgeting cycle, Economic Development and Spatial Planning submitted the capital prioritisation model report through the Council approval process. A report was compiled which included the purpose, content and structure of the capital prioritisation model and was subsequently released on C9 for circulation in July 2019. After the C9 report was circulated, it served at Exco early October 2019. The C9 report was approved at Mayco on the 16<sup>th</sup> of October 2019. For more information refer to Addendum 7.

## **16.3 Intergovernmental Planning**

### **16.3.1 Identification of Key Role Players**

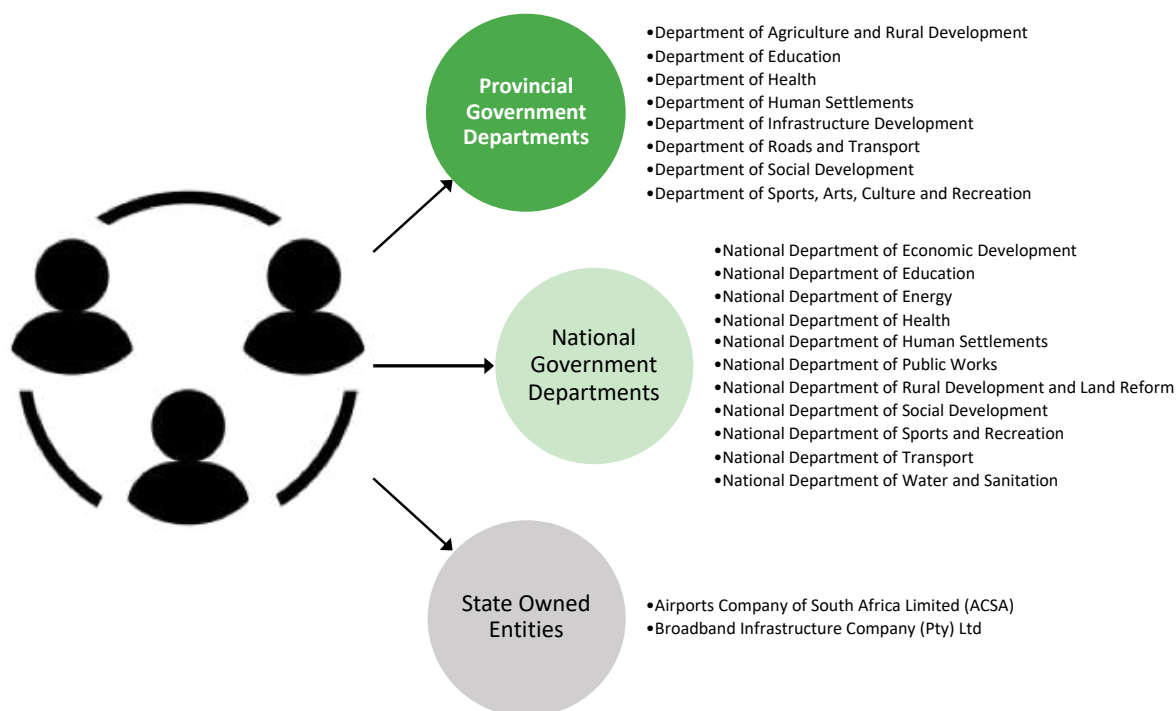
In order for the city to successfully identify an inter-governmental project pipeline, a number of key role players have been identified as outlined in Figure 59 below. The identification of an inter-governmental project pipeline aims to incorporate funding and projects from all spheres of government to prioritise collective public investment in targeted spaces<sup>5</sup>.

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<sup>5</sup> 2018/19 BEPP Core Guidance Note (Cities Support Programme, August 2017)



Figure 59 Intergovernmental Project Pipeline - Key Stakeholders



With the aim of achieving an inter-governmental project pipeline, the city engaged with a number of key stakeholders during 2019. For purposes of the 2020/21 BEPP, the city only managed to collect project information from Gauteng Provincial Government. This is largely attributed to the following challenges experienced during the stakeholder engagement process:

- Willingness of other public entities;
- No clear directive to provide information, and;
- Readiness of project information and MTREF Project lists.

During the stakeholder engagement process, some public entities were reluctant to engage in discussions regarding the IGR platform for reasons unknown. It was also difficult to request the data based on an argument which can be distilled to “BEPP requirements”. One of the more structural challenges within the public sector is the fact that municipal, provincial and national budget cycles are not aligned, which means that the 2020/21 MTREF project list for certain stakeholders were not readily available during the submission of the 2020/21 BEPP.

### 16.3.2 Gauteng Benchmarking Workshop

During the 2020/21 budgeting and reporting cycle, National Treasury facilitated the Gauteng Benchmarking workshop on the 21st of January 2020. As an outcome of the benchmarking process, National treasury requested the three Gauteng metros to analyse the draft 2020/21 ECE list for Gauteng and to investigate the alignment between Gauteng’s proposed project list and that of the City’s project list and spatial targeting focus. The City of Tshwane responded to this request by highlighting the following comments from various internal departments:

- Social Development: The social development centres identified are in line with the City’s Adjustment Budget for 2019/20 and thus aligns with Social Development planning.

- Gauteng Department of Agriculture and Rural Development (GDARD): GDARD planning should align with water and sanitation together with waste management service provision.
- Roads and Transport: There are various types of projects within the Gauteng and Metro Department which include new links; upgrades; rehabilitation; maintenance and planning. The capital planning programme applied by the Gauteng Department of Roads and Transport (GDRT) is based on an internal system and prioritization process. The city does not form part of this process or provide input to this process.

During the planning and budgeting process the City continuously engages with GDRT on a number of items. These are predominantly focussed on planning aspects and development applications affected by provincial roads:

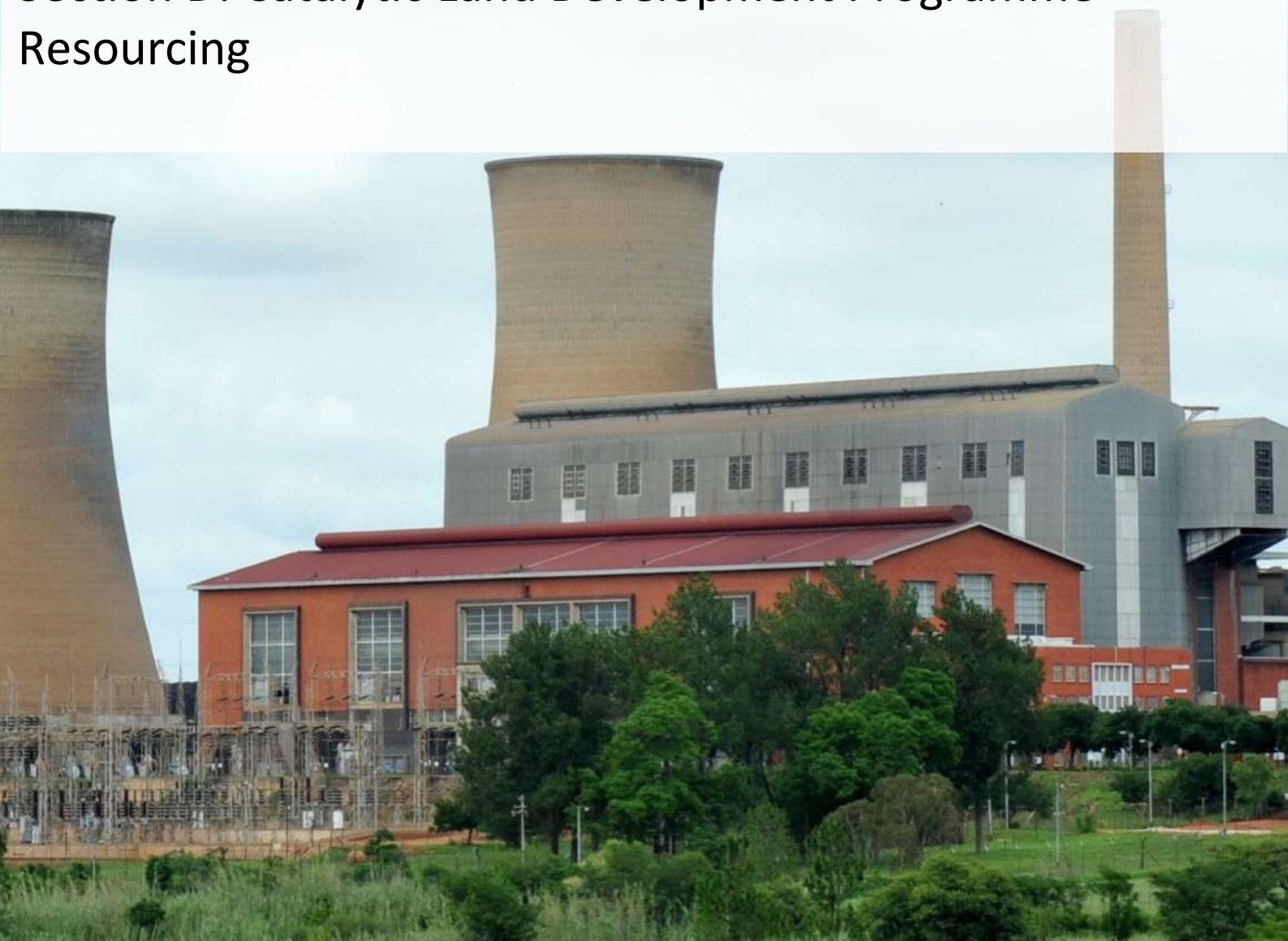
- “The reconstruction and upgrading of Garstfontein road (K50) between Loristo and Anton van Wouw streets”. The project entails the doubling of Garstfontein Road in the vicinity of Solomon Mahlangu Drive and is a joint project involving improvements to a municipal portion and a portion under a provincial jurisdiction. GDRT and representatives from Planning and Infrastructure Design Division meet regularly. Detail design will commence in 2019/20 (per agreement by the City) and construction during 2020/21.
- “K217 New Road Development”. This project is linked to the Tshwane Automotive City/Rosslyn nodal development. City engages regularly via TEDA, linked to AIDC and also GDRT.
- “K69 Upgrade”. The City and Gauteng Province work together regarding the K69 upgrade. The City assisted with the NMT design improvements during a revisit of the design. K69 as indicated on the project list has already started although the table date indicates that the starting date is not available.
- Health: Very limited joint planning occurred between the Health Department and Gauteng Province except for assistance regarding the identification of targeted land for new developments.
- Energy and Electricity: For USDG and INEP funded projects, the City engages with National Human Settlement and Department of Energy (DoE) during planning and project implementation. Particularly for INEP Grants, the City is required to apply for projects funds specifying envisaged projects. The DoE will then scrutinize the application, visit the specified projects and respond to the City’s application indicating whether the application is approved or not. On approval, the City and DoE will sign an MoU agreeing on projects to be executed and milestones to be achieved. The City will thereafter implement the projects, providing monthly reports. The DoE will during the project implementation conduct ad-hoc visits monitoring project until completion.
- Water and Sanitation: Ekurhuleni Water Care Company (ERWAT) and Magalies Water will be assisting the City with Waste Water Treatment Works projects and the agreement has been finalized.

The above has been communicated to National Treasury on the 10th of February 2020 to assist in the intergovernmental planning process and the outcomes of the Gauteng Benchmarking process. Refer to Addendum 8 for the communication trail between the City and National Treasury.

### **16.3.3 Intergovernmental Relation Forum**

The City has established an Intergovernmental Relation (IGR) Forum to deal with issues in the IDP. The objective of the forum is to ensure that Departments are able to meet quarterly with the City to discuss areas of cooperation and alignment. The City Strategies and Organisational Performance has been mandated to deal with IGR matters and this has been included in the Business Plan for the Department. For more information relating to the forum and outcomes refer to the 2019/20 and 2020/21 IDP.

## Section D: Catalytic Land Development Programme Resourcing



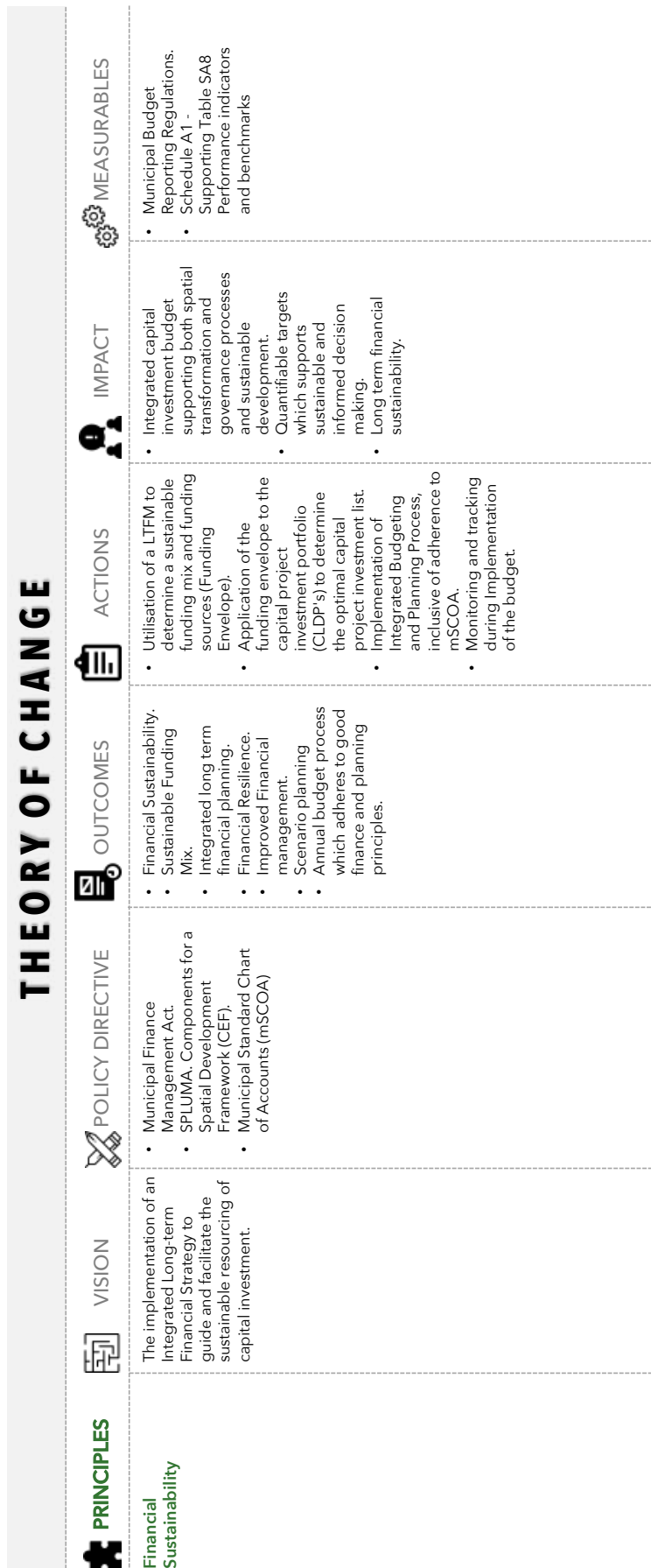
## Section D: Catalytic Land Development Programme Resourcing

Section C focussed on the identification, delineation and preparation of Catalytic Land Development Programmes (CLDP) through identifying spatially targeted focus areas for investment. Spatial priorities and achieving the outcomes for catalytic land investment should receive priority during the allocating of financial resources in order to catalyse capital investment towards spatial transformation. This aligns with the City's principle to achieve spatial transformation, but critically also requires focus on sustainable financial resourcing to achieve this.

In terms of the City's Theory of Change, the principle for the City to achieve financial sustainability builds on the principles of spatial transformation and collaborative planning, implementation and management. Sections B and C focussed on the "where?" and the "why" of capital investment, whereas section D will focus on "how?" these strategies will be financed sustainably as well as building a strategy to achieve and maintain sustainable financial growth and investment. Although the majority of Section D focusses on the principle of financial sustainability, outcomes from the spatial transformation principle plays a vital role in establishing the foundation for financial resourcing and ensuring good governance practices.



Figure 60 Theory of Change



The principle of financial sustainability shapes the vision of achieving an integrated Long-term Financial Strategy (LTFS) to guide and facilitate sustainable resourcing of capital investment. The outcomes required to achieve this includes the determination of a sustainable affordability envelope and optimal funding mix through integrated long-term financial planning, improved financial management, scenario planning through testing of CLDP affordability and an annual budgeting process which adheres to good finance and planning standards and best practices.

Actioning these outcomes include the utilisation of a Long-term Financial Model (LTFM) as part of the annual capital budget planning and preparation process. This will guide the City in determining sustainable and affordable funding envelopes, based on a sustainable mix of funding resources, and applying this to the capital project investment portfolio (CLDP) to determine the optimal capital project investment list based on spatially targeted prioritisation. Through actioning these outcomes, the City will achieve an integrated capital investment budget which supports spatial transformation and sustainable development. The City will also achieve quantifiable targets which supports and informs decision making to achieve long-term financial sustainability together with sound governance principles.

In terms of the BEVC, the following section has been structured to align to the third component within the value chain and describes the process of catalysing spatial transformation through the use of a LTFS to sustain the investment portfolio.

To achieve this, the City has established the use of a spatially enabled Capital Planning and Prioritisation System (CAPS) to identify and prioritise capital investment portfolios (CLDP). The prioritisation process considers, amongst other things, the economic impact and spatial priorities of Tshwane. Once prioritisation has been undertaken, the prioritised portfolio of projects is subjected to a rule-based budgeting process in order to prepare a budget scenario. In this process, provision is made for minimal subjective manual intervention and adjustments to the capital budget. Depending on the extent of the adjustments made, the final recommended budget-book is tested in terms of strategy alignment to ensure that the budget scenario is responsive to the strategic and spatial priorities of the City. Refer to Chapter 18 Budget Scenario, for a detailed description of the budgeting process and results.

In a concurrent and iterative process, the City's LTFM is developed, refined and applied making use of the City's financial history, its funding position, economic outlook and a number of other considerations. One of the functions of the LTFM is to provide a basis and serve as input in developing a LTFS for the City. The LTFS serves as a medium- to long-term financial roadmap for the City and provides strategic direction on financial management and policy choices to be considered for implementation to improve and sustain the financial position of the City.

## **17 Long-Term Financial Sustainability**

### **17.1 Introduction**

The City of Tshwane makes use of a Long-term Financial Model (LTFM) to inform the Medium-term Revenue and Expenditure Framework compilation. The model is updated taking into consideration economic changes, guidelines from the national and provincial spheres, strategic and policy direction of the municipality to ensure sustainability and goal orientated service delivery.

The LTFM is utilised to ensure financial affordability and sustainability over the medium to long-term and is considered a key financial planning tool.

This preliminary report provides an overview of the main findings of analysis on the City's current external environment and the results obtained from the long-term financial model. Information used in this analysis was obtained from the 2018/19 Consolidated Annual Financial.

## 17.2 Findings

The section provides both a summary of historic financial analysis for the period 2011-2019 and a forward-looking 10-year forecast from the current FY 2020 to FY 2029.

Based on the historic analysis the following are important:

- The CoT has the capacity to generate significant cash from its own operations, with a Redemption fund of R889 million; Short-term Investments of R3.6 billion and a bank and cash balance of R334 million at the end of FYE2019;
- Capex has however slowed down from levels of over R4.6 billion to FYE2016 to just over R3.3 billion in FYE2019.
- In recent years the Balance Sheet position improved from unsustainably high levels of gearing and weak liquidity position to more manageable levels of gearing and an improved liquidity position.
- Historic expenditure levels are highly dependent on the ability of the City to maintain a collection rate closer to 95% than the 90% at the end of FYE2019.

LTFM forecast:

- On-going urbanisation placing further pressure on the city's infrastructure;
- A slow-down in the economic growth rate also impacts on the City's financial position;
- Capital expenditure is slowed down over the MTREF-period but then accelerates at an average of 4,0% per year up to 2030;
- These new levels of Capex are forecast to be increasingly funded through borrowings;
- But Debt Servicing and Gearing remains within Treasury norms, largely due to revenue from own sources and cash generation capacity of the municipality;
- The Scenario Analysis, which tests an increase or decrease in the revenue collection rate to determine the resilience of the City's financial position, indicates how sensitive the City's financial position is to changes in some variables.
  - For instance, the liquidity position becomes negative if the debtor's payment ratio remains at the current level (90%).

## 17.3 Infrastructure Perspective

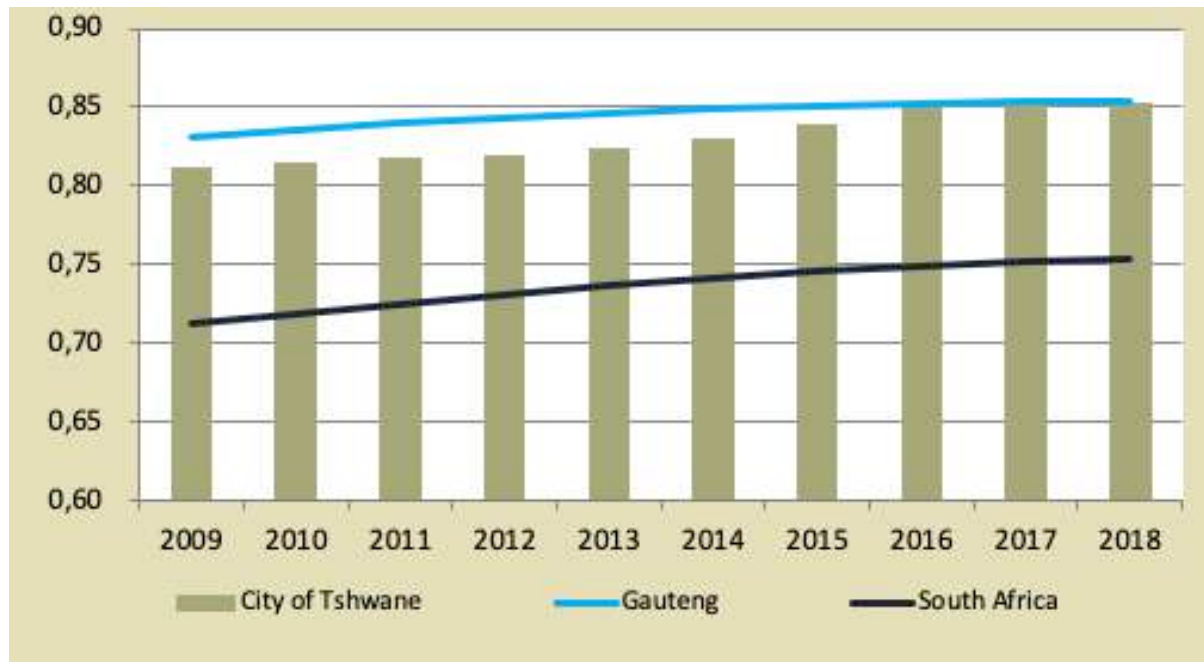
### 17.3.1 Household Infrastructure

#### 17.3.1.1 Infrastructure Index

The average Infrastructure Index (2008-17), a population-adjusted, access-to-service weighted index which measures a region's overall access to household infrastructure of 0.85 equals the provincial

average and exceeds the national index of 0.75. The City's service backlogs decreased during the period, however remained relatively high with regards to sanitation and refuse removal services.

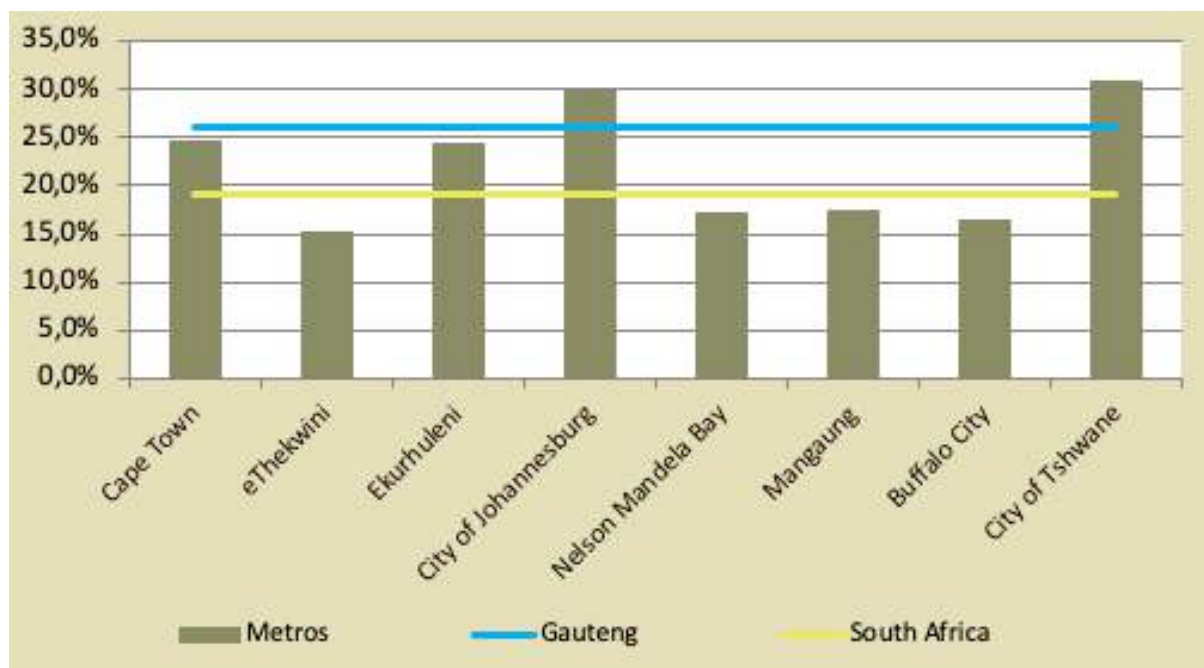
Figure 61 Infrastructure Index (Source: IHS Global Insight)



### 17.3.1.2 Number of Households

City of Tshwane experienced an increase of 31% in the number of households between 2009 and 2018 which is the highest of the metros in the Country, also higher than the provincial and national average. In 2018 there were approximately 1 100 000 households in the City of Tshwane.

Figure 62 Number of Households



### 17.3.1.3 Household Infrastructure Provision

By comparing backlogs of sanitation, water, electricity and refuse removal in urban as well as non-urban areas one notes that CoT's infrastructure service delivery backlogs with regards to sanitation and refuse removal is higher, while the infrastructure service delivery backlogs with regards to water and electricity is lower.

Table 18 Household Infrastructure Provision (2018)

Infrastructure	Gauteng		City of Tshwane	
Above RDP Level				
Sanitation	3 156 190	89,0%	663 683	80,9%
Water	3 410 805	96,2%	783 735	95,6%
Electricity	3 037 710	85,6%	703 466	85,8%
Refuse				
Removal	3 152 346	88,9%	669 324	81,6%
Below RDP or None				
Sanitation	390 859	11,0%	156 459	19,1%
Water	136 243	3,8%	36 407	4,4%
Electricity	509 338	14,4%	116 676	14,2%
Refuse				
Removal	394 702	11,1%	150 819	18,4%
Total Number of Households	3 547 048	100.0%	820 142	100.0%

## 17.4 Financial Model

### 17.4.1 Affordable Future Capital Investment

The total Capex demand is determined as part of the capital prioritisation exercise. Affordable Capex in the draft MTREF amounts to R11.2 billion. Results of the long-term financial model show an affordable capital expenditure envelope for the 10-year planning period of R45 billion, as seen in Table 3. This amount is subject to the City's optimal performance as well as stability in external factors (economic and demographic indicators) based on the assumptions used in the model. The proposed Capex funding mix for both the MTREF and LTFM results are respectively and briefly discussed hereafter.

#### 17.4.1.1 MTREF Capital Funding Mix

The City's MTREF budget 2020/21 – 2022/23 expects a capital budget amounting to R11.2 billion and funded as follows:

Table 19 MTREF Capital Funding Mix

R'm	Total	2020/21	2021/22	2022/23
Grants	5 191	2 099	1 533	1 558
Financing	4 500	1 500	1 500	1 500
Internally generated funds	1 096	232	370	493
Public Contributions	450	150	150	150
<b>Total</b>	<b>11 237</b>	<b>3 982</b>	<b>3 554</b>	<b>3 701</b>

The model accommodated the increased borrowing of R4.5 billion, Internally Generated Funding of R1.1 billion and Capital Grants of R5.2 billion for the MTREF period of 3 years to 2022/23 and allowed the model to calculate the future funding mix. Here the potential impact of the strong liquidity



position on capex is noted. Following sustained increases in the capital expenditure after 2011 when capital expenditure doubled, this now slows down over the MTREF-period to under R4 billion per annum in line with declining grant contributions. To keep pace with anticipated population growth and ongoing investment in new infrastructure as well as upgrading and renewal projects, the capital expenditure increases from R3.7 billion in 2022/23 to R5.7 billion in 2029/30.

The annual capital investment as budgeted by the municipality remains stable. This is further reflected by the positive gearing and debt service ratios which remain mainly below the National Treasury norms.

The capex budget of the City is financially feasible. Important to note however is that there is limited cash available to cover the minimum recommended liquidity level (after the MTREF period), to cater for unspent conditional grants, short term provisions, and working capital. These findings are illustrated in the graphs below.

#### 17.4.1.2 10-Year Capital Funding Mix

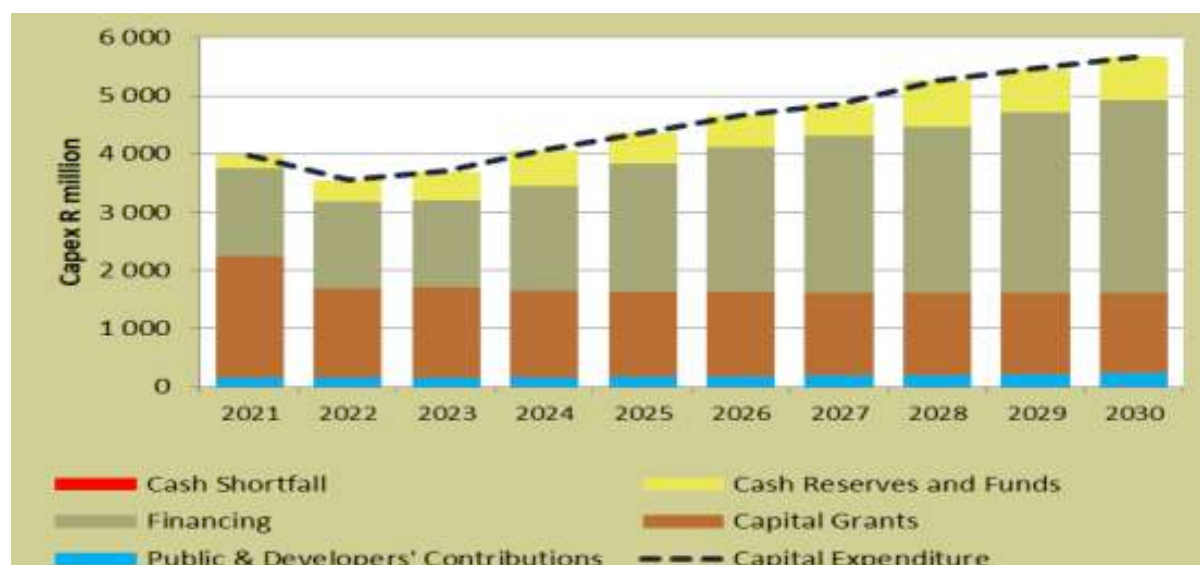
Due to the prevailing national fiscal constraint, reliance on grant funding in future is probably doubtful and the proportional amount of capital transfers in this latest estimate, when compared to previous estimates, has declined.

A balanced funding mix, incorporating a conservative level of external borrowing, will preserve own cash resources and will improve long term financial sustainability. The long-term financial model proposes the optimal funding mix below for capital expenditure over the next 10 years. This level of external borrowing will not result in a material breach of gearing or debt service ratio benchmarks.

Table 20 LTFM Capital Expenditure Envelope for the 10-Year Planning Period

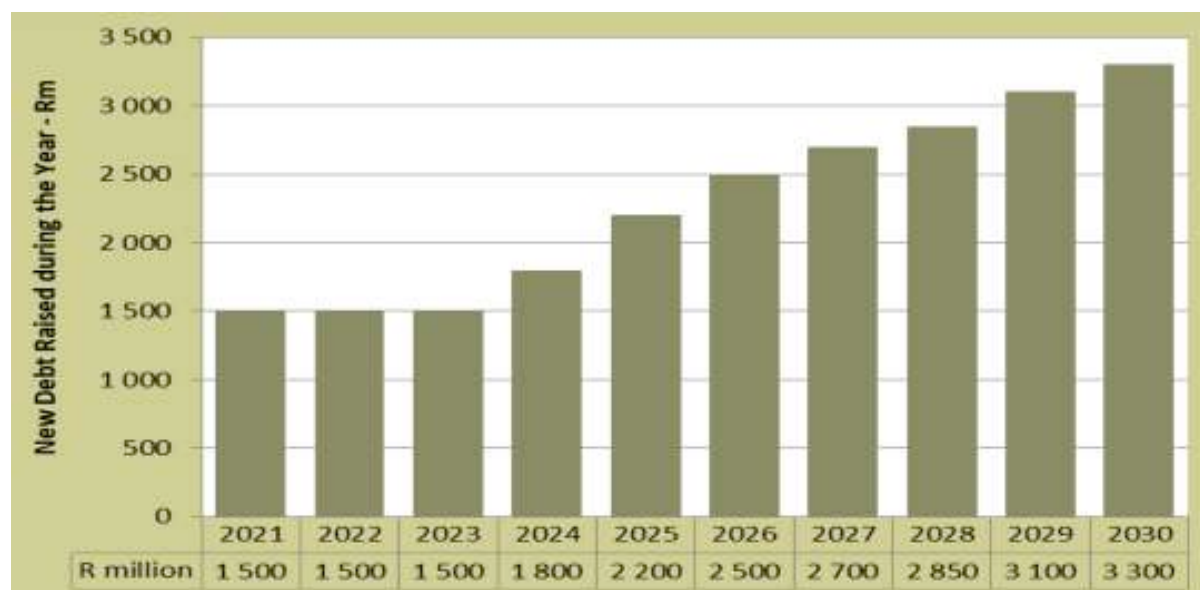
Year	MTREF	2024	2025	2026	2027	2028	2029	2030	10 yrs Total
Capital Grants	<b>5 191</b>	1 489	1 466	1 452	1 432	1 417	1 406	1 395	<b>15 248</b>
Financing	<b>4 500</b>	1 800	2 200	2 500	2 700	2 850	3 100	3 300	<b>22 950</b>
Internally generated funds	<b>1 096</b>	623	537	542	552	806	755	753	<b>5 664</b>
Public Contributions	<b>450</b>	154	163	174	184	196	209	154	<b>1 754</b>
<b>Capital Expenditure</b>	<b>11 237</b>	4 066	4 367	4 667	4 868	5 269	5 470	5 671	<b>45 616</b>

Figure 63 Forecast Period: Capital Funding Mix



Based on the forecast External Financing requirement, the Debt Service to Total Expense Ratio exceeds the 9% benchmark only in 2023 and 2026 as loan repayments become due, but remains below the benchmark for most of the period. After a period of marginal decline over the MTREF-period, External Financing increases by about 12% per year. The amount of annual external financing is estimated to be distributed as follows:

Figure 64 Forecast Period: New Debt Raised



### 17.4.1.3 Cash and Investments

The City's projected cash and investments gradually increases from R5 billion at FYE2021 to a peak of around R12 billion at FYE2030. During the MTREF-period, the City falls below the minimum liquidity requirements over the MTREF but thereafter the situation starts improving to the extent that capital replacement reserves are being created in later years. For purposes of the projections the minimum required liquidity level caters for unspent conditional grants, reserves, short term provisions, consumer deposits and 2 months working capital. The total minimum liquidity required reflects an

increasing trend through the planning period from R6.3 billion to R10.2 billion in 2030; thus, leaving a surplus of R1.5 billion at the end of planning period.

Figure 65 Forecast Period: Cash vs Minimum Liquidity Levels

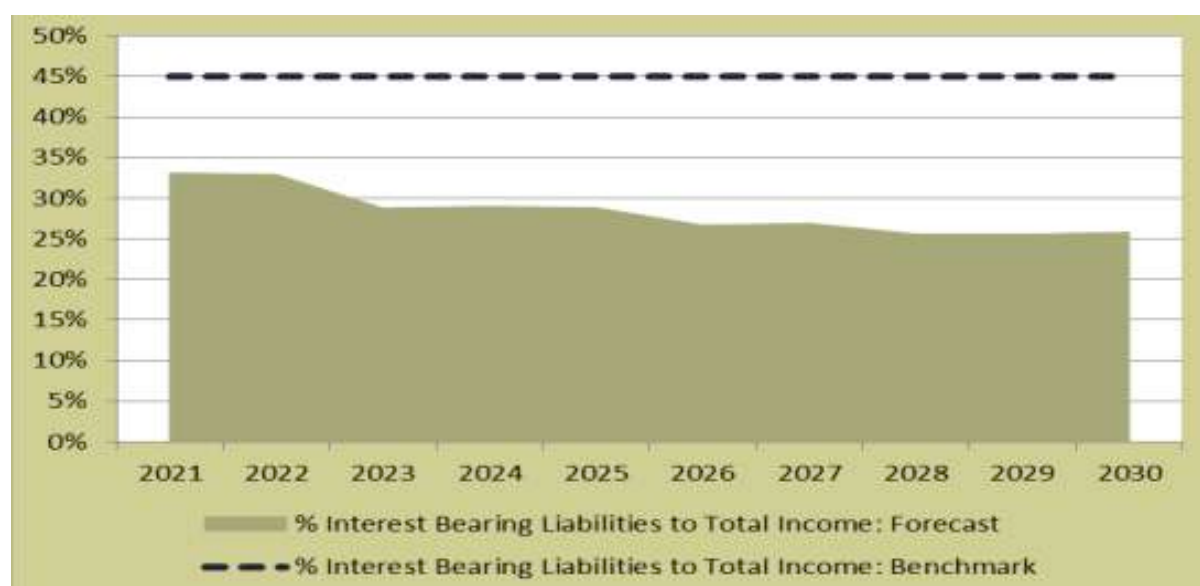


The current cash and investments improves over the planning period to cover the minimum liquidity requirement between 2021 – 2030 and provision is made for the CRR.

#### 17.4.1.4 Gearing

The ratio of Long-Term Interest-Bearing Liabilities to Income is illustrated in the graph below. Considering the size of the City and its financial ability, a maximum gearing ratio of 45% should be affordable. The model forecast that gearing remains below 32%, from 2021 throughout the planning period. This is well within the National Treasury guidelines.

Figure 66 Forecast Period: Gearing



The affordability of the projected capex depends on the optimal performance of the City and a stable socio-economic environment. A scenario involving no increase in the revenue collection rate has been tested to determine the resilience of the City's financial position. The results of the scenario testing are given below.

#### 17.4.1.5 Ratio Analysis

The Base Case forecast ratios are presented below. Although the model is not programmed to measure the ratios as required by National Treasury in all instances, it does provide comfort that the municipality is sustainable in future - on condition that it operates within the assumed benchmarks set in the financial plan.

Table 21 Ratios

Ratio	Norm	2020/21	2022/23	2024/25	2026/27	2028/29	2029/30
Cash Generated by Operations / Own Revenue		8,7%	12,6%	11,5%	11,0%	10,5%	10,1%
Liquidity Ratio (Current Assets : Current Liabilities)	1:1.5 - 1:2.0	1 : 1	1,1 : 1	1,1 : 1	1,1 : 1	1,3 : 1	1,3 : 1
Cash Surplus / Shortfall on Minimum Liquidity Requirements (R'm)		- 1 402	- 914	489	505	821	1 409
Cash Coverage Ratio (incl Working Capital)		0,8 : 1	0,9 : 1	1,1 : 1	1,1 : 1	1,1 : 1	1,1 : 1
Capital Expenditure / Total Expenditure	10% - 20%	9,3%	8,2%	8,4%	8,4%	8,3%	8,1%
Total Debt (Borrowings) / Operating Revenue	45%	35,1%	30,0%	29,8%	27,7%	26,3%	26,5%
Debt Service Cover Ratio (Cash Generated by Operations / Debt Service)		1,1 : 1	1,1 : 1	1,6 : 1	1,5 : 1	1,3 : 1	1,4 : 1
Total Grants / Total Revenue		17,5%	16,6%	15,2%	14,4%	13,6%	13,3%

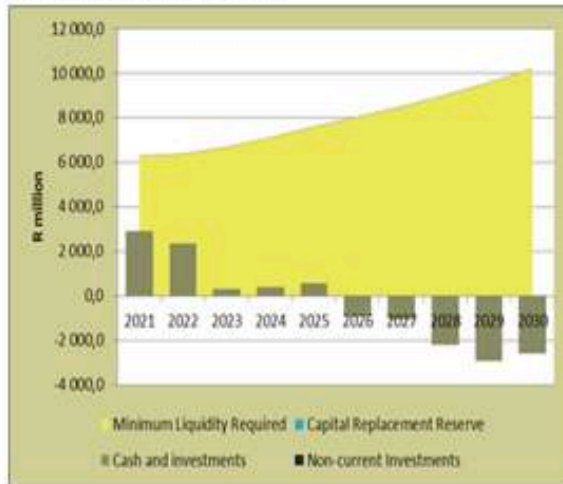
### 17.5 Scenario Analysis

#### 17.5.1 Scenario Analysis: Collection Rate Remaining at 90%

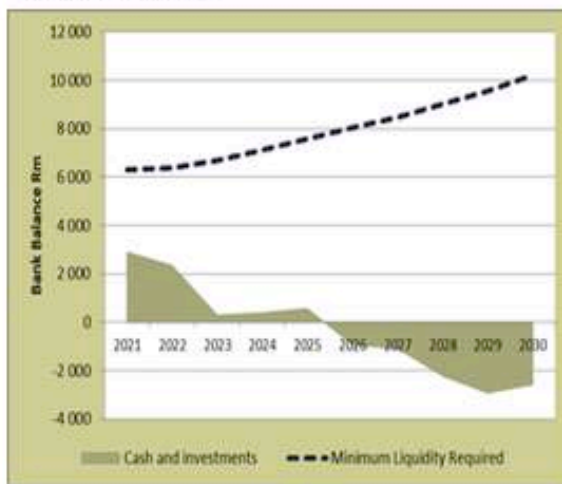
A scenario analysis is performed to see the impact of no increase in the City's debtor's collection rate of 90% in 2018/19 over the MTREF period and for the remaining years, the collection rate is 93%. The model reflects that the low collection rate will have a negative impact on cash resources and the long-term financial sustainability of the municipality.

Figure 67 Scenario Analysis: Collection Rate Remaining at 90%

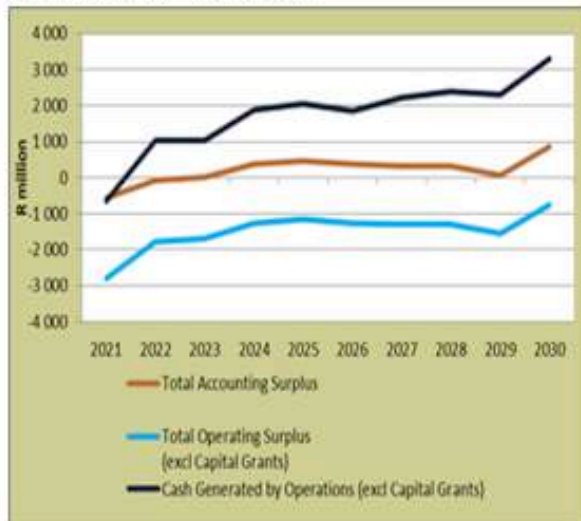
#### CASH VS RESERVES



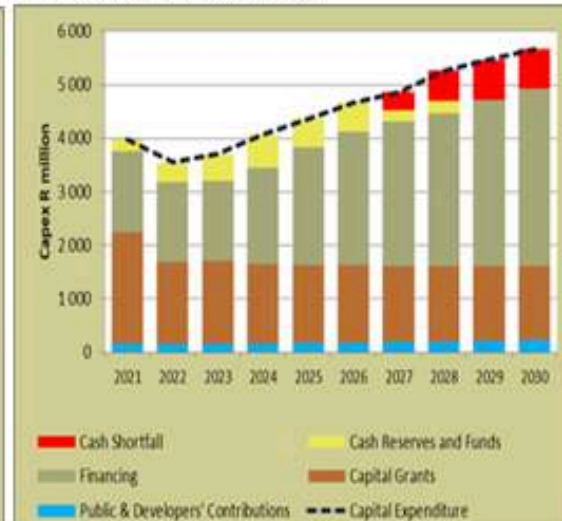
#### BANK BALANCE



#### ANALYSIS OF SURPLUS



#### CAPITAL FUNDING MIX



The low debtors' collection reflects these financial consequences:

- Consistent operating budget deficits over the 10-year forecast.
- A negative cash and investment balance of –R2 577 million at the end of the planning period.
- Weak liquidity ratios decreasing from 0,8:1 to 0,4:1 by year 10.
- There are insufficient cash surpluses to contribute towards a funding mix for capex from 2027 onwards.
- Number of months cash coverage ratio decreases to 0 times.
- Cash and short term investments decreases annually from R2 899 million in 2021 and is completely depleted by 2026.



## 17.6 Outcomes and Risks

### 17.6.1 Outcome of the Financial Assessment

The City remained in a positive position during the past 9 years of assessment. This was demonstrated by an Accounting Surplus of R2.8 billion posted as at FYE2019, which increased from R1.3 billion in FYE2011.

Positive to note is that the City still managed to generate an operating surplus of R969 million compared to R807 million in 2011 when capital grants are excluded.

The strong financial performance enabled the City to generate R2.6 billion in cash from its operations (excl capital grants). This was R1.1 billion higher than the cash generated from operations in FY2011.

In the past 9 years, the municipality spent R31.8 billion on capital infrastructure programmes utilising Capital Grants to the value of R17.5 billion, Borrowings and internally generated funds of R7.7 billion. The annual capital expenditure gradually increased from R2.2 billion in FY2011 to the highest of R4.6 billion in FY2016 after which it declined to R3.3 billion in FY2019.

#### 17.6.1.1 Strengths

- Strong balance sheet & improved liquidity position
- Investment-grade credit rating
- Strong cash flow from own operations and limited reliance on transfers from national and provincial treasuries
- The positive increase in Cash and Cash Equivalents.
- Capacity to post Accounting and Operational Surpluses.

#### 17.6.1.2 Weaknesses

- The collection ratio of 93% in 2017/18 and 90% in 2018/19 remained below the minimum acceptable benchmark of 95% and threatens the City's future affordability.
- Decreasing annual capital expenditure since 2017, despite the current high service delivery backlogs.

### 17.6.2 Outcome of the forecast model

#### 17.6.2.1 The socio-economic base and future revenue

- Strong economic base and diversified economy, but rapid increase in migration to the municipal area placing pressure on existing infrastructure;
- However – national conditions also impact on the municipality – with only moderate growth forecast over the forecast period;
- A key structural weakness can now be identified: as economic growth rates slow, the municipality approaches the limits of increased tariffs to extract additional revenue for ever-growing needs of poorer communities;

- To pursue and sustain progressive / redistributive / pro-poor policies – it is essential that the economic base expands and critically, job creation (especially at entry-level) accelerates.
- Over the forecast period – there is still scope for increased tariffs (broadly aligned with CPI) and for more progressive tariff structures.

#### **17.6.2.2 Capital investment**

- As the population continues to increase, the municipality needs to deal with normalising historic settlement patterns to accommodate new migrants and improve access to and mobility within the municipal area;
- Capital expenditure is increasing over the planning period;
- It is also evident that it cannot do so by using its own cash resources;
- Whilst capital expenditure and external financing remains at current levels over the MTREF period, both capex and external loan financing increases per year after the MTREF period;
- Even at this rate of increase both Debt Servicing and Gearing levels remain within the National Treasury norms;

#### **17.6.2.3 Scenario analysis**

- The scenario analysis explored the implications of a situation where there is no improvement in the debtor's collection rate and remaining below the accepted norm. A consistent collection rate of 90% over the MTREF and 93% for the rest of the planning period negatively impacts the liquidity position and capex affordability;
- Two aspects worth noting: Capital expenditure is largely similar when comparing the Base Case to the scenario however cash shortfalls are experienced in the last four years, and secondly the Cash Position drops significantly over the period.

### **17.6.3 Risks to the 2020/21 MTREF Estimates**

#### **17.6.3.1 Revenue**

Revenue collection is generally under pressure as a result of existing poor economic conditions in the country. The situation will be exacerbated by the impact of the Covid19 pandemic and the response by government and the global community. Although the impact cannot be quantified yet, indications are that it will further constrain the ability of customers to pay for municipal services.

It is essential that the City achieve the budgeted collection rate of 95%, if not cash generation will be under pressure.

- **Electricity**

Electricity revenue is the largest source of own revenue for the City. The electricity revenue budget has been based on an estimated decreasing demand for the service which is in line with growth trends over the last five financial years. If billing and collection of this revenue does not realise, the sustainability of the electricity services function will be negatively impacted as well as the potential for cross-subsidisation of other municipal services.

- **Distribution Losses**

The programmes that has been put in place to reduce distribution losses in the City is of vital importance. An increase in electricity and water distribution losses of 0,2% per annum respectively has the potential to reduce cash at year-end by approximately -2.1% per annum over the MTREF.

### **17.6.3.2 Expenditure**

- **Employee Related Costs**

The implementation of the benchmarking exercise will have a step-change effect on employee related costs. As the City implements the in-sourcing of security services, the movement between contracted services and employee related costs can potentially cost more due to additional employment benefits and concomitant costs.

- **Repairs and Maintenance**

Expenditure on repairs and maintenance is yet to reach the norm defined by NT. Poor implementation of the planned expenditure will result in further deterioration in the City's infrastructure, distribution losses and revenue.

- **Bulk Purchases**

Increasing distribution losses coupled with decreasing demand for services is disastrous. If distribution losses are going to increase while the demand for the services are decreasing, bulk purchases will become unaffordable as the City will not be able to collect revenue to pay for the bulk purchases. This will threaten the self-sustainability of the electricity and water services.

- **Depreciation and asset impairment**

There is a need to have the equivalent of the budgeted amount of depreciation and asset impairment per annum, to fund a capital replacement reserve fund. This will assist in funding future repairs and maintenance and replacement of assets. Any unauthorised expenditure on the budget will erode the potential for such a source of funds.

- **Contracted Services**

City expenditure on contracted services is proportionally larger than the National Treasury norm. Expansion of the City's employee numbers as a result the phasing-in of in-house asset protection services have to be accommodated by a phasing-out of contracted services expenditure on watchmen services.

## **17.7 Conclusion**

### **17.7.1 Affordable investment in infrastructure**

The long-term financial model proposes the optimal funding for investment in infrastructure to be R11.2 billion over the 2021 MTREF and over the ten-year planning period at R45.6 billion. This can only be achieved if the City's budget objectives are met over the medium to long term.

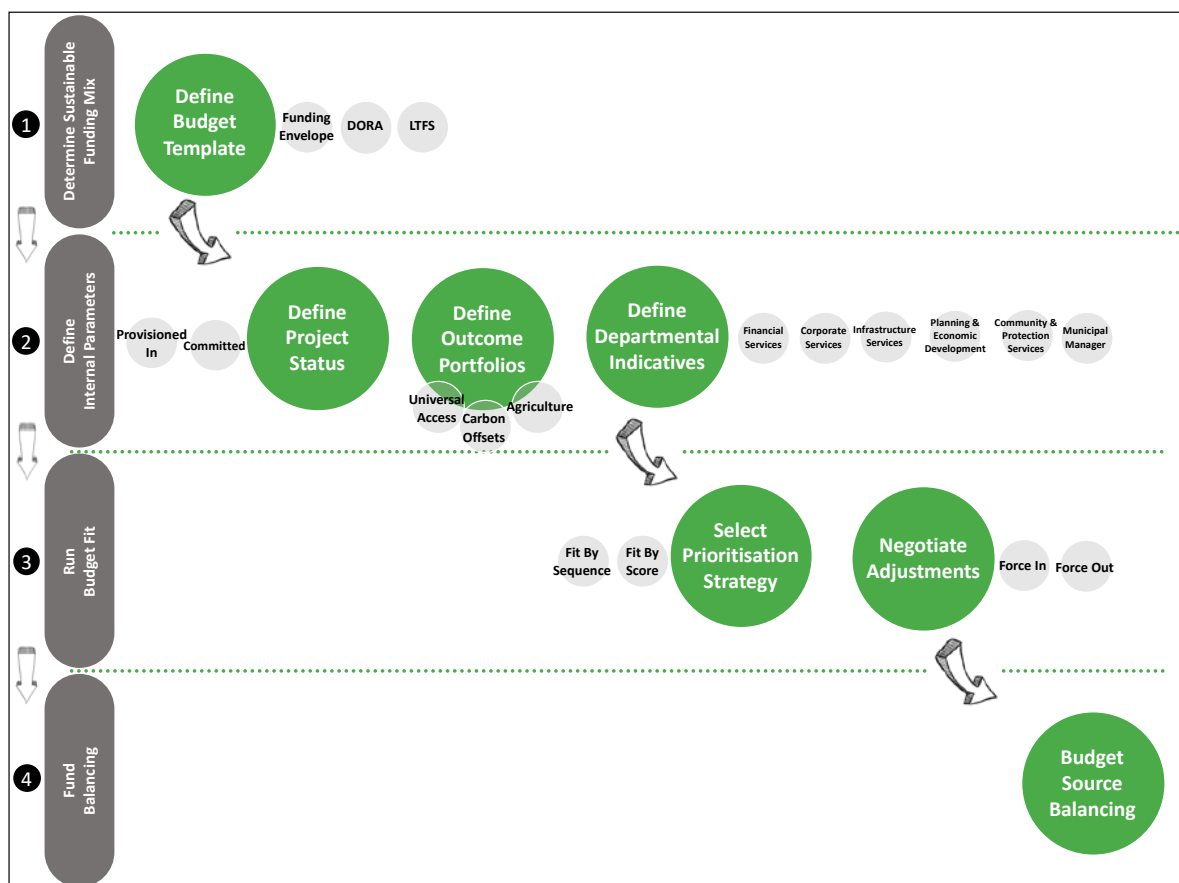
## 18 Budget Scenario

The budgeting scenario development process in the City of Tshwane, as facilitated by the CaPS system, is also known as the “Budget Fit” process. This name was derived from the process of “fitting” the project needs, in order of priority (ranking) into a finite budget, defined as the affordability envelope, modelled using a long-term financial modelling instrument (LTFM). The budget scenario development process is at its essence a mathematical rule-based process and the City is in a position to specify and configure various rules and limits in the process. These rules and limits could include, but are not limited to, annual affordability limits, departmental indicative budget limits, funding source eligibility rules, ring-fenced budget outcome segments, capital project priority or ranking etc.

The purpose of this section is to discuss the methodology, rule sets and criteria used during the budget scenario development process as well as to demonstrate how different choices regarding the budget scenario development strategies will result in different budget scenarios.

The budget scenario development methodology is shown schematically in Figure 68. This methodology is a sequential application of a set of rules and parameters that results in a project either being added to the draft capital budget or rejected from the draft capital budget.

Figure 68 Budget scenario development methodology



### 18.1 Budget Scenario Parameters

The following parameters all take part within the budgeting process.

### 18.1.1 Affordability envelope and budget fit strategy

The affordability envelope is the sustainable and financially modelled annual total capital budget limit which the City should adhere to in order to maintain and improve its financial operational position. It is included as the total amounts which need to be fitted to during the budget fit process.

National Treasury advocates long-term planning and financial sustainability modelling as part of the BEVC. As a result, the City has utilised a long-term financial planning instrument (LTFM) to model the 10-year affordable capital funding envelope. The annual capital budget affordability values from the LTFM were used to determine the capital budget indicatives for the outer years of the Medium-term Revenue and Expenditure Framework (MTREF) (i.e. year 4 to year 10), whereas the indicatives as determined by the City's Finance department through the published Division of Revenue Act (DORA) allocations together with the existing long-term financial commitments from capital projects on the MTREF budget were used for the MTREF Period. The differences between these indicative amounts from the Finance Department and the amounts from the LTFM affordability envelope amounts are not significant as the input published draft 2020/21 MTREF capital budget is an input to the LTFM modelling process. Thus, the City's Finance Department opted to use a combination of both to build the 2020/21 budget scenario (Refer to Chapter 18.3.2 for an analysis in this regard).

***It should be noted that the draft version of the 2020/21 capital budget (23 March 2020) was used to establish the multi-year financial commitments for the budget fit scenario process. All of the analysis relating to the budget has been based on this version and will be updated once the 2020/21 MTREF budget has been finalised.***

Different strategies may be followed in the application of the affordability envelope during the budget fit process. The affordability envelope sets the upper limits of the annual budget targets over the period of the budget fitting process. Based on the City's strategic intent, the affordability envelope may be further broken down in components, for example Portfolios limits, Stage Gate limits, or Department limits, or a combination of aforementioned. The sequence in which these budget fit rules are organised, determines the outcome of the budget fit process. During the fit process, once the total budget limit per year has been depleted by fitting projects, projects which do not fit in that particular budget year based on financial year budget constraints will roll over to the next financial year cycle and attempt to fit the project in subsequent financial years.

### 18.1.2 Project score

Project scores were determined according to the methodology and with the results as outlined in Section C of this report. The purpose of a project score is to determine a relative ranking between all the projects within the list of capital demand projects. Projects are allocated their requested budgets in order of scored priority, within the constraints of the budget scenario rules such as available budget constraints and/or qualifying rules to access certain types of funding sources.

### 18.1.3 Project status

For the purposes of the budget fit process, specific project statuses are required to take into account the multi-year financial impact of projects published on previous financial year budgets. A project's status is based on an assessment of its actual physical and financial progress at the time of performing the budget fit. The statuses available for allocation are:

- **Committed** – Committed status may be allocated to projects which formed part of either the approved MTREF capital budget (Annexure A to the IDP) or the adjusted MTREF capital budget (Annexure B to the IDP) of the City for the previous financial year, and which are contractually committed as assets under construction or having concluded the



procurement processes. Termination of any committed projects will result in either legal or financial liability for the City. Given commitments made on these projects by the City, the budget fit methodology regards these projects as non-negotiable, irrespective of their capital prioritisation model project score or the financial year budget constraints. This means that projects which carry Committed status will be fitted to the affordability envelope in the financial year in which they request funds (no delays may be applied). Should the total of Committed projects exceed the affordability envelope for a given year, the budget fit will allow these projects to “overfit” the available amount for that particular year.

- **Provisioned-In** – Provisioned-In status may be allocated to projects which formed part of either the approved MTREF capital budget (Annexure A to the IDP) or the adjusted MTREF capital budget (Annexure B to the IDP) of the City for the previous financial year, but which are not contractually committed as assets under construction or those projects which have not concluded their procurement processes. Termination of any provisioned projects will not result in either legal or financial liability for the City. The budget fit methodology regards these projects as having a higher priority than projects without any status in the list. This is due to the fact that they formed part of the previous MTREF submitted capital project programme, although their implementation timeframes may still be negotiable. Projects with this status will be fitted to the affordability envelope in the financial year in which they request funds only to the extent that it does not exceed the available affordability envelope in a given year. If the requests exceed the affordability envelope at any sub strategy within the combined strategy, provisioned projects may be fitted with delay to a financial year with sufficient available affordability envelope. These projects will not be allowed to “overfit” the available amount for any particular year.

#### **18.1.4 Year of budget request**

Specific budget requests per project may be made in a specific year or over a number of years, depending on the planned implementation lifecycle of a project. During the budget fit process, requests may be fitted with delay i.e. in financial years later than the years in which the funds were requested. This allocation is based on the available affordability envelope per year, project statuses and project scores.

#### **18.1.5 Project budget request**

The project budget request is considered across the total lifecycle of the project. The City of Tshwane previously only budgeted across the MTREF. During the 2020/21 budgeting cycle consideration was given to expanding it to longer-term planning (10 years) and provided the opportunity to consider a budget scenario beyond the MTREF Period. This decision was taken based on the capital demand and capital project planning from departments extending beyond the MTREF, and to align the capital budget process output with the requirements of SPLUMA in terms of the preparation of a 10-year Capital Expenditure Framework (CEF).

### **18.2 Budget Scenario Fit Process**

The following process explains how the abovementioned parameters interact in order to compile a budget (refer to Figure 68).

### **18.2.1 Step 1: Define a budget template**

During the first step of the budget fit process, a budget template is compiled on CaPS which includes the affordability envelope and strategy selection, as explained in Chapter 18.1.1. This is a mandatory step required to define the total amount of available capital funding for the MTREF. It may be informed by a number of sources:

#### **18.2.1.1 Division of Revenue Act (DORA)**

The Division of Revenue Act is published on an annual basis with the purpose of documenting the equitable share and grant allocations to all levels of government. The exact publication dates of the DORA may differ from year to year. The DORA publication sets out available grant funding to the City. Typical funding sources available to local government emanating from the DORA publication include:

- Public Transport Infrastructure Systems Grant (PTIS);
- Neighbourhood Development Partnership Grant (NDPG);
- Urban Settlements Development Grant (USDG);
- Integrated National Electrification Programme (INEP);
- Community Library Services (CLS);
- Social Infrastructure Grant (SIG);
- LG SETA Discretionary Allocation;
- Integrated City Development Grant (ICDG); and
- Housing Delft Grant.

#### **18.2.1.2 Long-term financial strategy**

Capital budget funding typically comprises the following funding sources:

- Own Funding: Funding generated from the City's revenue (i.e. rates and taxes).
- Public Contributions and Donations: Donations and bulk services contributions for capital expenditure to provide additional bulk capacity to service new developmental demand.
- Capital Replacement Reserves (CRR): Savings by the City for deferred capital expenditure to maintain the existing municipal asset base.
- Borrowings: External loans from the financial markets or bonds issued by the municipality to the financial markets.

The City of Tshwane Finance Department currently determines the affordable funding envelope and optimal funding mix, using a long-term financial modelling instrument (LTFM) and includes the indicative affordability envelope in the Budget Fit template.

A long-term financial strategy was determined based on the outputs from the LTFM. The LTFM is firstly used to determine the City's current financial position in terms of a number of legislated parameters such as liquidity, debt gearing, percentage own funding, the status of the capital replacement reserve and others. An appraisal is done on the historical financial performance of the City to date.

The LTFM is then used to create the most optimal roadmap over the next 10 years for the City. This roadmap takes into account the capital demand emanating from the CaPS process, sources of funding, the extrapolated future financial positions and estimated cash flows. The process informs the levels of funding that could reasonably be sustained under current assumptions. This process in turn, feeds back into the budgeting (budget fit) process that is performed bi-annually using the CaPS system.

With the two processes (LTFM) and CAPS constantly informing each other in an iterative manner, the City has the assurance of having embarked on a sustainable financial path pertaining to resourcing their capital investment plan.

### **18.2.2 Step 2: Define project Committed or Provisional Status**

CaPS allows for two different project statuses during budget fit process in order to account for the multi-year budget effect of projects which were previously published as part of either the approved or adjusted municipal capital budget. Refer to Chapter 18.1.3. After assessing the capital projects list, project statuses are included accordingly and in preparation for the budget fit process.

### **18.2.3 Step 3: Define outcome portfolios**

This is an optional step and is performed when the City has decided on a budget fit strategy which includes the use of portfolios – refer to Chapter 18.1 for an explanation. Allocation of portions of the affordability envelope to portfolios will ring-fence the allocated amounts to the specified portfolios. Only projects which are included in these specified portfolios may compete for the allocated budget amounts. A typical example of a portfolio could be the projects in support of the “climate change and resilience programme” or projects in support of “economic development”.

### **18.2.4 Step 4: Define departmental indicatives**

This is an optional step and is performed when the City has decided on a budget fit strategy which includes the use of departmental budget splits – refer to Chapter 18.1 for an explanation. Allocation of portions of the affordability envelope to departments will ring-fence the allocated amounts to the specified departments. When the budget fit is executed, projects which belong to the departments will be fitted to the ring-fenced departmental budget limit in order of highest prioritisation score or ranking to lowest prioritisation score or ranking, until the budget limit for that department has been reached.

### **18.2.5 Step 5: Define stages**

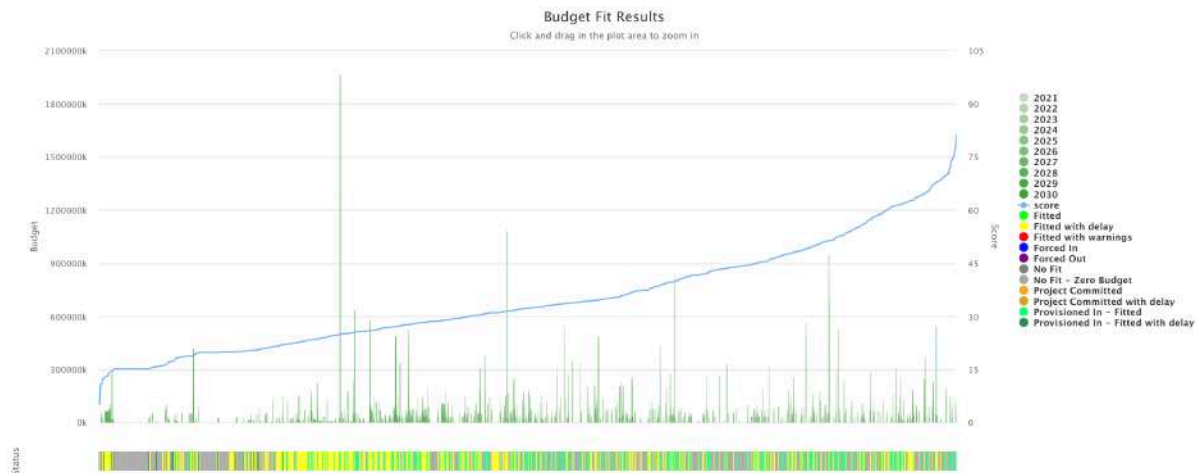
This is an optional step and is performed when the City has decided on a budget fit strategy which includes the use of stage gate budget splits – refer to Chapter 18.1 for an explanation. Allocation of portions of the affordability envelope to stage gates will ring-fence the allocated amounts to the specified stages. When the budget fit is executed, projects which belong to the stage gates will be fitted to the ring-fenced departmental budget limit in order of highest prioritisation score or ranking to lowest prioritisation score or ranking, until the budget limit for that stage gate has been reached.

### **18.2.6 Step 6: Select Prioritisation Model Run / Results**

The selection of a Capital Prioritisation Model (CPM) and its associated results is a mandatory step in any budget fit process, given that budget scenario development implies making trade-offs between project priority and financial sustainability and affordability. When the budget fit is executed, projects will be considered in order of highest priority score to lowest priority score until the affordability envelope amounts have been reached, depending on the strategy which had been specified in the budget fit template.

A visualisation of the budget fit result is shown in Figure 69<sup>6</sup>. The graph shows the ranking of projects from highest priority (on the right) to lowest priority (on the left). Each project is shown as a stacked bar in bar graph format, where the sum of the MTREF financial year capital requests for the projects (total MTREF capital budget) is shown as the height of the bar.

Figure 69 Budget fit results



The budget fit status of each project, after executing of the budget fit routine, is shown below the bar graph in colours. Each colour represents a different status. In the example provided, the orange projects represent committed projects, which means they were fitted irrespective of their CPM project score in the financial year in which they requested budget.

Green projects represent projects which were fitted based on their CPM project score in the year which they requested funding, given that there was available capital budget available in that financial year. The yellow projects represent projects that were fitted with delay. These projects received high scores on the CPM but there was not sufficient budget available in the financial year in which they requested capital funding, therefore the budget fit routine fitted them to a financial year later than they requested budget, where sufficient available capital budget was available in the budget template.

Eligible statuses include:

- **Committed:** Committed projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, and which are contractually committed as assets under construction. Termination of any committed projects will result in either legal or financial liability for the municipality.
- **Provisioned In:** Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality.

<sup>6</sup> The budget fit results graph is an interactive graph that can be accessed via the CaPS system used by the City. For representation purposes the graph has been filtered to only indicate projects within the Utility Services Unit.

- **Provisioned in with delay:** Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality and are therefore delayed in the budget fit process. A project will then be delayed to a financial year where the budget cap total has not been exceeded.
- **Fitted:** Projects that enjoy the status “fit” are projects that scores highest in relation to the remaining projects to be fit, with the provision that the budget cap total has not been exceeded.
- **Fitted with Delay:** Projects that enjoy the status “fit with delay” are projects that scores highest in relation to the remaining projects to be fit, with the exception that the budget cap total for the year in which the project requests budget has been exceeded. A project will then be delayed to a financial year where the budget cap total has not been exceeded.
- **No Fit:** This status is assigned to projects that were not able to qualify for budget.
- **No Fit – Zero Budget:** This status is assigned to projects that do not request budget.

### 18.2.7 Step 7: Negotiated adjustments (Force-in / Force-out)

Once a draft capital budget has been developed using the budget fit process, the portfolio of projects which make up the draft capital budget needs to undergo a number of approvals. A draft portfolio of capital projects prepared following a complex, multi-disciplinary and inclusive process is unlikely to meet all the political expectations – the process was designed to be close to matching most expectations but some outliers or exceptions to the rule are to be expected. Therefore, a negotiated adjustment process is accommodated in the budget fit process whereby projects can be added or removed from the portfolio of capital projects based on motivations and representations made during budget discussion forums.

### 18.2.8 Step 8: Budget source balancing

The last step in the budget fit process is to ensure that all available funding sources documented in the budget fit template have been utilised optimally and that none of the funding sources are over-subscribed (i.e. more is asked than what is available for that fund). The funding source balancing is also the last check to ensure that all projects which are linked to grant funding are eligible according to the funding definitions and rules as set out in the Division of Revenue Act (DORA).

## 18.3 Budget Scenario Results

### 18.3.1 Budget demand

The annual budget process of the City starts with a process of collaboratively collecting the capital investment demand or need across all departments in the City, in response to the various city strategies, policy documents and plans. Table 22 shows the capital investment demand for the City over the 10-year period, starting in 2020/21. The table is disaggregated by organisational department for the City.



Table 22 Capital Expenditure wish-list per Department (R'000)

Departments	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026
Agriculture & Rural Development	R25	R37	R32	R15	R7	R0
Airport Services	R72	R35	R0	R0	R0	R0
Communications and Marketing	R4	R0	R0	R0	R0	R0
Customer Relations Management	R52	R14	R6	R2	R0	R0
Economic Development and Spatial Planning	R346	R95	R110	R164	R97	R3
Electricity	R1 177	R1 174	R1 167	R1 010	R827	R56
Emergency Services	R60	R99	R163	R385	R528	R363
Environmental Management & Parks	R79	R91	R55	R62	R52	R0
Group Audit and Risk	R25	R25	R25	R25	R25	R0
Group Financial Services	R54	R11	R11	R10	R10	R10
Group Legal & Secretariat Services	R0	R0	R0	R0	R0	R0
Group Property Management	R124	R10	R10	R10	R10	R0
Health Services	R169	R522	R540	R329	R366	R0
Housing and Human Settlement	R3 036	R1 188	R762	R15	R0	R0
Housing Company Tshwane	R1 097	R736	R295	R1	R0	R0
ICT, Applications & Infrastructure	R298	R400	R330	R142	R182	R0
Integrated Rapid Public Transport Network (IRPTN)	R698	R544	R533	R234	R170	R0
Licensing	R7	R12	R0	R2	R3	R0
Metro Police Services	R524	R706	R841	R563	R675	R100
Office of the Chief Whip	R0	R0	R0	R0	R0	R0
Office of the City Manager	R23	R10	R0	R0	R0	R0
Office of the Executive Mayor	R3	R3	R3	R0	R0	R0
Office of the Speaker	R0	R0	R0	R0	R0	R0
Regional Operations & Coordination (ROC)	R87	R73	R21	R9	R9	R3
Roads and Stormwater	R1 604	R2 204	R2 326	R1 866	R2 805	R350

Departments	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026
ROC - Community & Social Development Services	R0	R0	R0	R0	R0	R0
ROC - Environment & Agricultural Management	R16	R3	R0	R0	R0	R0
ROC - Health Services	R0	R0	R0	R0	R0	R0
ROC - Housing & Human Settlements	R0	R0	R0	R0	R0	R0
ROC - Roads & Transport	R0	R0	R0	R0	R0	R0
ROC - Utility Services	R11	R0	R0	R0	R0	R0
Shared Services	R140	R30	R180	R180	R180	R0
Social Development	R0	R17	R0	R0	R40	R40
Sports, Recreation & Infrastructure Development	R184	R252	R272	R370	R278	R75
Tshwane Bus Services	R22	R29	R21	R20	R20	R0
Tshwane Economic Development Agency	R241	R458	R1	R0	R0	R0
Tshwane Leadership and Management Academy	R20	R9	R4	R0	R0	R0
Waste Management Services	R214	R105	R155	R280	R350	R0
Water and Sanitation	R895	R1 350	R2 208	R3 405	R3 081	R710
<b>Grand Total</b>	<b>R11 305</b>	<b>R10 243</b>	<b>R10 071</b>	<b>R9 099</b>	<b>R9 714</b>	<b>R1 709</b>

Departments	2026 / 2027	2027 / 2028	2028 / 2029	2029 / 2030	MTREF Total	Total
Agriculture & Rural Development	R0	R0	R0	R0	R94	R115
Airport Services	R0	R0	R0	R0	R107	R107
Communications and Marketing	R0	R0	R0	R0	R5	R5
Customer Relations Management	R0	R0	R0	R0	R71	R72
Economic Development and Spatial Planning	R7	R0	R0	R11	R551	R832
Electricity	R51	R46	R41	R0	R3 517	R5 548
Emergency Services	R516	R53	R10	R51	R322	R2 228
Environmental Management & Parks	R0	R0	R0	R0	R225	R339
Group Audit and Risk	R0	R0	R0	R0	R75	R126
Group Financial Services	R0	R0	R0	R0	R75	R105
Group Legal & Secretariat Services	R0	R0	R0	R0	R1	R1
Group Property Management	R0	R0	R0	R0	R145	R165

Departments	2026 / 2027	2027 / 2028	2028 / 2029	2029 / 2030	MTREF Total	Total
Health Services	R0	R0	R0	R0	R1 231	R1 925
Housing and Human Settlement	R0	R0	R0	R0	R4 986	R5 001
Housing Company Tshwane	R0	R0	R0	R0	R2 128	R2 128
ICT, Applications & Infrastructure	R0	R0	R0	R0	R1 028	R1 352
Integrated Rapid Public Transport Network (IRPTN)	R0	R0	R0	R0	R1 775	R2 180
Licensing	R0	R0	R0	R0	R19	R24
Metro Police Services	R92	R105	R98	R109	R2 071	R3 813
Office of the Chief Whip	R0	R0	R0	R0	R0	R0
Office of the City Manager	R0	R0	R0	R0	R33	R33
Office of the Executive Mayor	R0	R0	R0	R0	R9	R9
Office of the Speaker	R0	R0	R0	R0	R0	R0
Regional Operations & Coordination (ROC)	R0	R0	R0	R0	R181	R201
Roads and Stormwater	R25	R30	R25	R25	R6 134	R11 259
ROC - Community & Social Development Services	R0	R0	R0	R0	R0	R0
ROC - Environment & Agricultural Management	R0	R0	R0	R0	R19	R19
ROC - Health Services	R0	R0	R0	R0	R0	R0
ROC - Housing & Human Settlements	R0	R0	R0	R0	R0	R0
ROC - Roads & Transport	R0	R0	R0	R0	R0	R0
ROC - Utility Services	R0	R0	R0	R0	R11	R11
Shared Services	R0	R0	R0	R0	R350	R710
Social Development	R0	R0	R0	R0	R17	R97
Sports, Recreation & Infrastructure Development	R0	R0	R0	R0	R708	R1 431
Tshwane Bus Services	R0	R0	R0	R0	R73	R113
Tshwane Economic Development Agency	R0	R0	R0	R0	R699	R699
Tshwane Leadership and Management Academy	R0	R0	R0	R0	R32	R32
Waste Management Services	R0	R0	R0	R0	R475	R1 105
Water and Sanitation	R950	R250	R80	R67	R4 454	R12 997
<b>Grand Total</b>	<b>R1 641</b>	<b>R484</b>	<b>R254</b>	<b>R263</b>	<b>R31 619</b>	<b>R54 782</b>

From the table above, the following is of importance to note:

- The City's capital investment demand extends across the 10-year planning horizon.
- The total annual capital investment demand for the City decreases over the 10-year planning horizon. Capital investment demand is relatively stable at R10bn per annum for the first five years, where after it drops from 2025/26 to an average capital investment demand figure of around R1bn or less. This demonstrates that the City is moving towards

a truly long-term planning and budgeting approach, but that outer year planning and budgeting still needs to mature throughout the organisation.

- The total MTREF capital investment demand is approximately R31.6bn whereas the total 10-year capital investment demand is approximately R54.7bn.

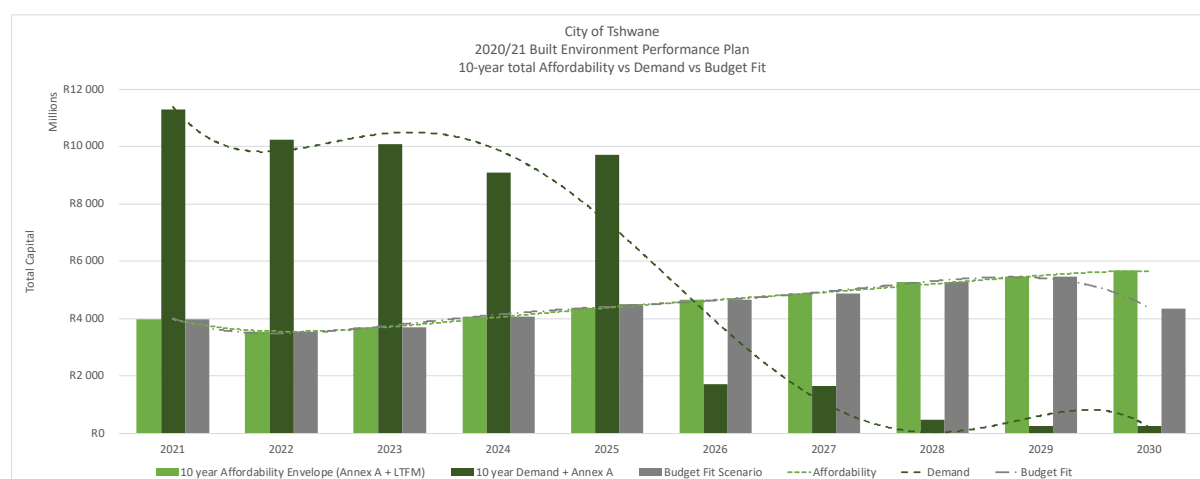
### 18.3.2 Funding Envelope

The affordability envelope, or otherwise stated, the funding envelope is the result of the Long-Term Financial Strategy (LTFS) prepared for the municipality. The aim of the Long-Term Financial Model (LTFM) is to define a set of parameters to which the municipality can roll out capital expenditure projects. The key parameter of interest for the budget fit process to continue is the total capital expenditure that is deemed as affordable per year.

The purpose of this section is therefore to take the results of the LTFM and to indicate what should be actively used to guide capital investment through the budget fit template – better defined as the total available capital expenditure per year or annual capex budget cap.

The total affordable capital expenditure for the 10-year planning period of the City amounts to R 45 billion, with a demand of R54,7 billion and a budget fit over the 10-year period at R44 billion, fitting to 97% of the total affordability over the 10-year planning horizon.

Figure 70 10-year Capital Budget based on Affordability vs Demand vs Budget Fit



Based on Figure 70, the following should be noted:

- The demand of the MTREF and the following 2 years saturates the affordability of the City with more than a double of the affordability envelope
- Due to the high demand in the first 5 years of the 10-year capital demand the amount of capital requests must be fitted into the following years
- The high demand causes a fit of capital budget into the outer years (2024 – 2026) saturating the high demand of the MTREF
- The trendline based on demand, suggests a large amount of backlog with a lack of future planning with the flattening of the demand in the outer years.

### 18.3.3 Budget fit statuses

Table 23 shows the capital budget's demand after the budget fit process has been applied. It shows that for the entire MTREF period, no budget was fitted or fitted with delay based on project scores. This indicates that the multi-year financial commitments of the 2020/21 draft capital budget (Annexure A) virtually depletes the entire funding envelope available for the MTREF period. Projects only start fitting to the budget envelope based on their priority score from 2023/24 onwards.

Table 23 10-year Budget Scenario Fit status (R'000)<sup>7</sup>

Year	Fitted	% Fitted	Fitted with delay	% Fitted with delay	Project Committed	% Project Committed
2020 / 2021	R0	0%	R0	0%	R3 982	22%
2021 / 2022	R0	0%	R0	0%	R3 554	20%
2022 / 2023	R0	0%	R0	0%	R3 701	20%
<b>MTREF Total</b>	<b>R0</b>	<b>0%</b>	<b>R0</b>	<b>0%</b>	<b>R11 237</b>	<b>62%</b>
2023 / 2024	R55	32%	R1 217	5%	R2 795	15%
2024 / 2025	R90	53%	R1 121	4%	R3 305	18%
2025 / 2026	R17	10%	R4 275	16%	R375	2%
2026 / 2027	R0	0%	R4 751	18%	R117	1%
2027 / 2028	R0	0%	R5 139	20%	R133	1%
2028 / 2029	R0	0%	R5 342	20%	R127	1%
2029 / 2030	R8	5%	R4 256	16%	R84	0%
<b>Total</b>	<b>R170</b>	<b>100%</b>	<b>R26 101</b>	<b>100%</b>	<b>R18 172</b>	<b>100%</b>

From the table above, the following is of importance to note:

- More or less 48% of capital demand (wish-list) had not been fitted over the MTREF period.
- The budget scenario development process fits projects successfully to the affordability envelope up to 2029/30, where after the capital project demand declines far below the modelled affordability envelope for the final year of the 10-year horizon.
- From the budget scenario result it is evident that there is spare capital funding capacity for the final year of the 10-year horizon (2029/30) amounting to R1.3bn.

<sup>7</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Figure 71 10-year Budget fit profile

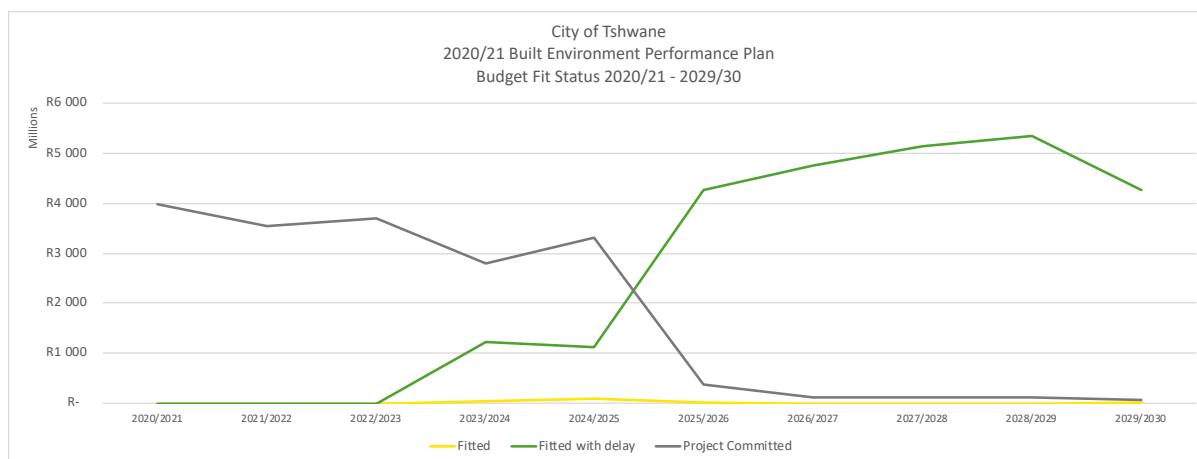


Figure 71 represents the budget fit profile over the 10-year planning horizon as per the budget fit strategy applied. It should be noted that some of the budget fit statuses listed below did not feature within the City's budget fit strategy due to limited funding envelope availability and the structure of the MTREF capital budget. However, each of the available budget fit statuses can be interpreted as follow:

- **Committed:** In the first year, projects that are currently under construction still has contractual commitments and cannot be fit at any other stage without having a negative impact on the City. These projects therefore are allocated budget in the first year, and not over the MTREF period. Only projects marked as committed and provisioned-in were fitted for the MTREF period.
- **Provisioned in:** These projects receive the most budget in the first years because they had already been declared as part of the MTREF. As time continues, these commitments decrease, and so does the capital requirement of these projects. In the case of Tshwane, only projects marked as committed and provisioned-in were fitted for the MTREF period.
- **Fitted:** During the MTREF period, no new capital demand is fitted. This is because of the finalisation of projects with a committed or provisioned-in status. Once these commitments had been served, the funding envelope opens up capacity to fit new projects. In the case of Tshwane, this only occurs after the third and outer year of the MTREF.
- **Fitted with delay:** During the MTREF period, no new capital demand is fitted with delay. This occurs because there is no capacity within the MTREF period, and a fitted with delay status can only be assigned to projects that are delayed. Fitted with delay budget availability gradually increases as the funding envelope opens up. In the case of Tshwane, this only occurs after the third and outer year of the MTREF.
- **No Fit:** Projects that do not fit are projects with the lowest score. It should be noted that a majority of projects were not fitted due to the limited funding envelope and the assigned committed/provisioned-in statuses. In the case of Tshwane, only projects marked as committed and provisioned-in were fitted for purposes of the MTREF period, which left very little room for budget fit in the outer year.
- **No Fit – Zero Budget:** Even though these projects do not currently have any capital demand, they have been conceptualised for capital demand in the near future. It is



therefore important to have sight of these projects on one single platform, together with the rest of the project pipeline.

Table 24 Budget Fit Statuses within the Budget Fit Scenario<sup>8</sup>

Budget Fit Statuses	Number of Projects	% of Total Projects
Fitted	12	1%
Fitted with delay	619	72%
Project Committed	231	27%
<b>Total number of projects within the budget fit Scenario</b>	<b>862</b>	<b>100%</b>

The Budget fit Scenario indicates that 72% of all projects are fitted with delay, i.e. not receiving budget within the requested financial year. Capital projects that are fitted with delay, highlighting the fact that planned capital expenditure requires future planning due to the demand being far more than the affordability envelope of the City.

### 18.3.4 Budget fit results

The following section shows a summary for the 2020/21 MTREF based on the 10-year capital budget scenario results.

#### 18.3.4.1 Units

The 10-year 2020/21 capital budget analysis by Tshwane Units, is shown in Figure 72 and Table 25 respectively.

<sup>8</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Figure 72 10-year 2020/21 Capital Budget per Unit (R'000)

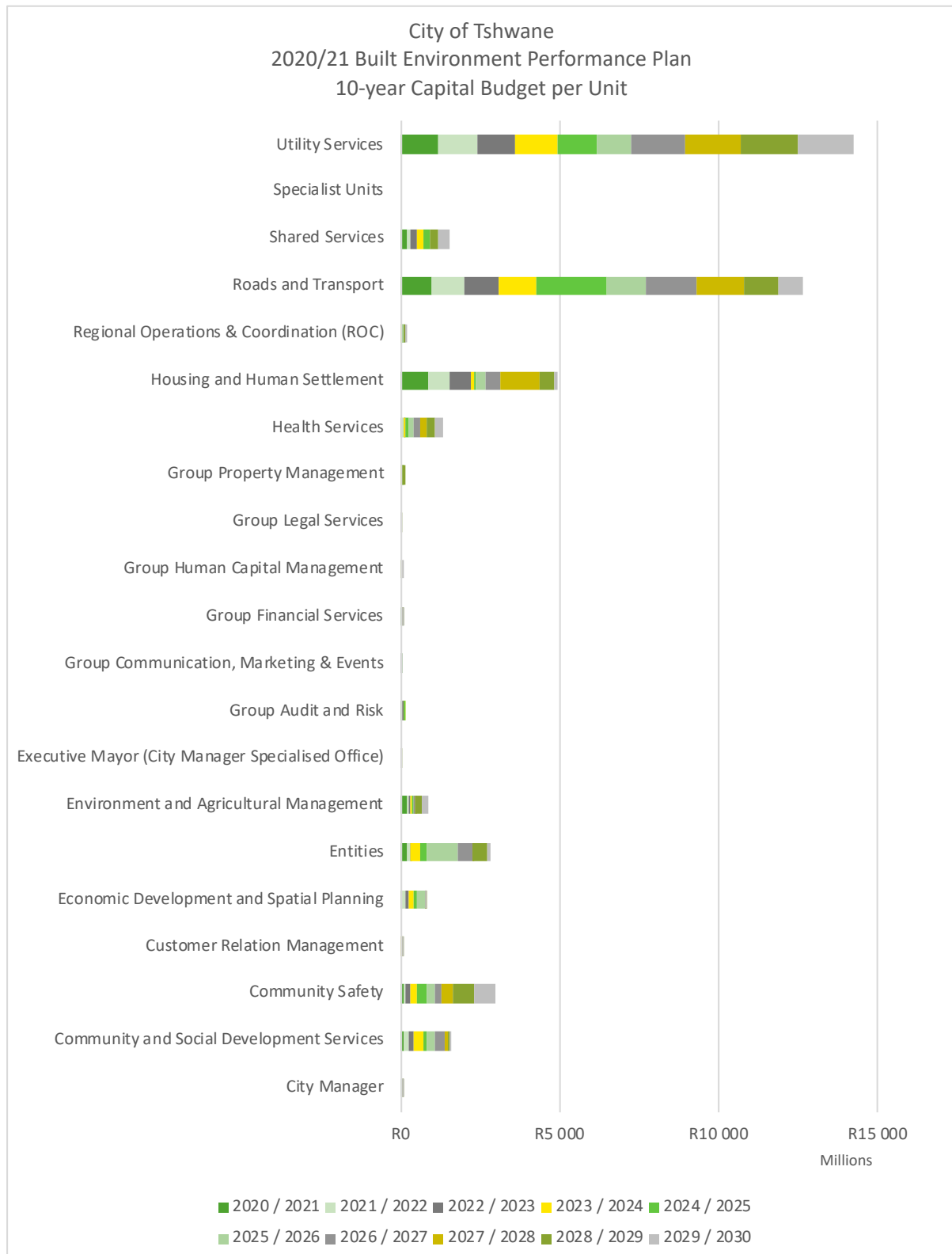


Table 25 10-year 2020/21 Capital Budget per Unit (R'000)<sup>9</sup>

Units	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
City Manager	R0	R0	R0	R0	R0	R23	R10
Community and Social Development Services	R79	R162	R180	R275	R130	R254	R283
Community Safety	R77	R80	R142	R237	R294	R257	R194
Customer Relation Management	R0	R4	R4	R0	R0	R4	R0
Economic Development and Spatial Planning	R65	R89	R107	R147	R87	R263	R0
Entities	R189	R101	R1	R316	R194	R1 018	R418
Environment and Agricultural Management	R193	R56	R56	R54	R60	R1	R21
Executive Mayor (City Manager Specialised Office)	R0	R0	R0	R0	R0	R0	R0
Group Audit and Risk	R25	R25	R25	R25	R25	R0	R0
Group Communication, Marketing & Events	R4	R0	R0	R0	R0	R0	R0
Group Financial Services	R42	R1	R1	R0	R0	R0	R0
Group Human Capital Management	R0	R0	R0	R0	R0	R0	R0
Group Legal Services	R0	R0	R0	R0	R0	R0	R0
Group Property Management	R0	R10	R10	R14	R10	R11	R0
Health Services	R50	R43	R0	R63	R78	R160	R232
Housing and Human Settlement	R855	R702	R662	R110	R35	R306	R442
Regional Operations & Coordination (ROC)	R2	R8	R5	R39	R6	R18	R5
Roads and Transport	R988	R990	R1 111	R1 196	R2 190	R1 251	R1 570
Shared Services	R227	R77	R207	R213	R214	R0	R0
Specialist Units	R0	R0	R0	R0	R0	R0	R0
Utility Services	R1 186	R1 206	R1 190	R1 377	R1 194	R1 102	R1 692
<b>Grand Total</b>	<b>R3 982</b>	<b>R3 554</b>	<b>R3 701</b>	<b>R4 066</b>	<b>R4 516</b>	<b>R4 667</b>	<b>R4 868</b>

Units	2027 / 2028	2028 / 2029	2029 / 2030	MTREF	Total	% of MTREF	% of Total
City Manager	R0	R0	R0	R0	R33	0,0%	0,1%
Community and Social Development Services	R120	R32	R13	R421	R1 528	3,7%	3,4%

<sup>9</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Units	2027 / 2028	2028 / 2029	2029 / 2030	MTREF	Total	% of MTREF	% of Total
Community Safety	R375	R665	R681	R299	R3 002	2,7%	6,8%
Customer Relation Management	R15	R32	R11	R7	R69	0,1%	0,2%
Economic Development and Spatial Planning	R0	R23	R8	R260	R789	2,3%	1,8%
Entities	R16	R480	R95	R292	R2 828	2,6%	6,4%
Environment and Agricultural Management	R29	R179	R214	R305	R861	2,7%	1,9%
Executive Mayor (City Manager Specialised Office)	R0	R3	R3	R0	R6	0,0%	0,0%
Group Audit and Risk	R0	R0	R0	R75	R126	0,7%	0,3%
Group Communication, Marketing & Events	R0	R0	R0	R5	R5	0,0%	0,0%
Group Financial Services	R0	R16	R16	R43	R75	0,4%	0,2%
Group Human Capital Management	R0	R27	R3	R0	R30	0,0%	0,1%
Group Legal Services	R0	R0	R0	R0	R1	0,0%	0,0%
Group Property Management	R0	R110	R0	R20	R165	0,2%	0,4%
Health Services	R167	R275	R285	R94	R1 354	0,8%	3,0%
Housing and Human Settlement	R1 276	R448	R95	R2 219	R4 931	19,8%	11,1%
Regional Operations & Coordination (ROC)	R0	R68	R55	R15	R206	0,1%	0,5%
Roads and Transport	R1 529	R1 071	R752	R3 089	R12 647	27,5%	28,5%
Shared Services	R0	R251	R344	R511	R1 532	4,5%	3,4%
Specialist Units	R0	R0	R0	R0	R0	0,0%	0,0%
Utility Services	R1 745	R1 790	R1 774	R3 581	R14 256	31,9%	32,1%
<b>Grand Total</b>	<b>R5 272</b>	<b>R5 470</b>	<b>R4 348</b>	<b>R11 237</b>	<b>R44 443</b>	<b>100,0%</b>	<b>100,0%</b>

From the table above, the following is of importance to note:

- A large portion of the capital budget is allocated to several key infrastructure departments with a focus on creating infrastructure, at a total of 71.6% of the total budget.
- Utility Services has the largest portion of capital allocated, comprising of Electricity and Water and Sanitation accounting for 32% of the total capital budget over the 10-year planning horizon.
- Roads and Transport (comprising of Airports, Public Transport, and Roads and Stormwater), has a total budget of R12.6bn, allocated in the total 10-year capital budget, making it the second largest unit at 28.5% of the total budget. With Housing and Human Settlement as the third biggest contributor to the total capital budget with 11%.

- Utility services and Roads and Transport dominate the 2020/21 MTREF budget allocations with 32% (R3,5bn) and 27,5% (R3bn) respectively, followed by Housing and Human Settlement at 19.8% (R2,2bn).
- National Treasury places emphasis on the integration and collaborative planning which should occur between Housing and Human Settlements and Roads and Transport, particularly within integration zones. The need for this collaborative and integrated planning is demonstrated by the fact that these two departments collectively consume 47.2% (R5,3bn) of the 2020/21 MTREF capital budget.
- The current 2020/21 MTREF analysis indicates the Top 3 units as Utility Services, Roads and Transport and Housing and Human Settlements accounting for 79% of the total 2020/21 MTREF. The budget allocation within the MTREF indicates that the main focus of the budget is within infrastructure.

The departments with the largest capital budgets are infrastructure related departments. The integration and collaboration of infrastructure services investments within the same spatial area is a requirement from National Treasury. Infrastructure investments within the City ensures a better basic service delivery and an increase rates base in future. The City's intent on providing basic services are evident in the total amount of capital budget allocation towards infrastructure services.

#### **18.3.4.2 Departments**

The 10-year 2020/21 capital budget analysis by Tshwane Departments, is shown in Figure 73 and Table 26 respectively.

Figure 73 10-year 2020/21 Capital Budget per Department (R'000)

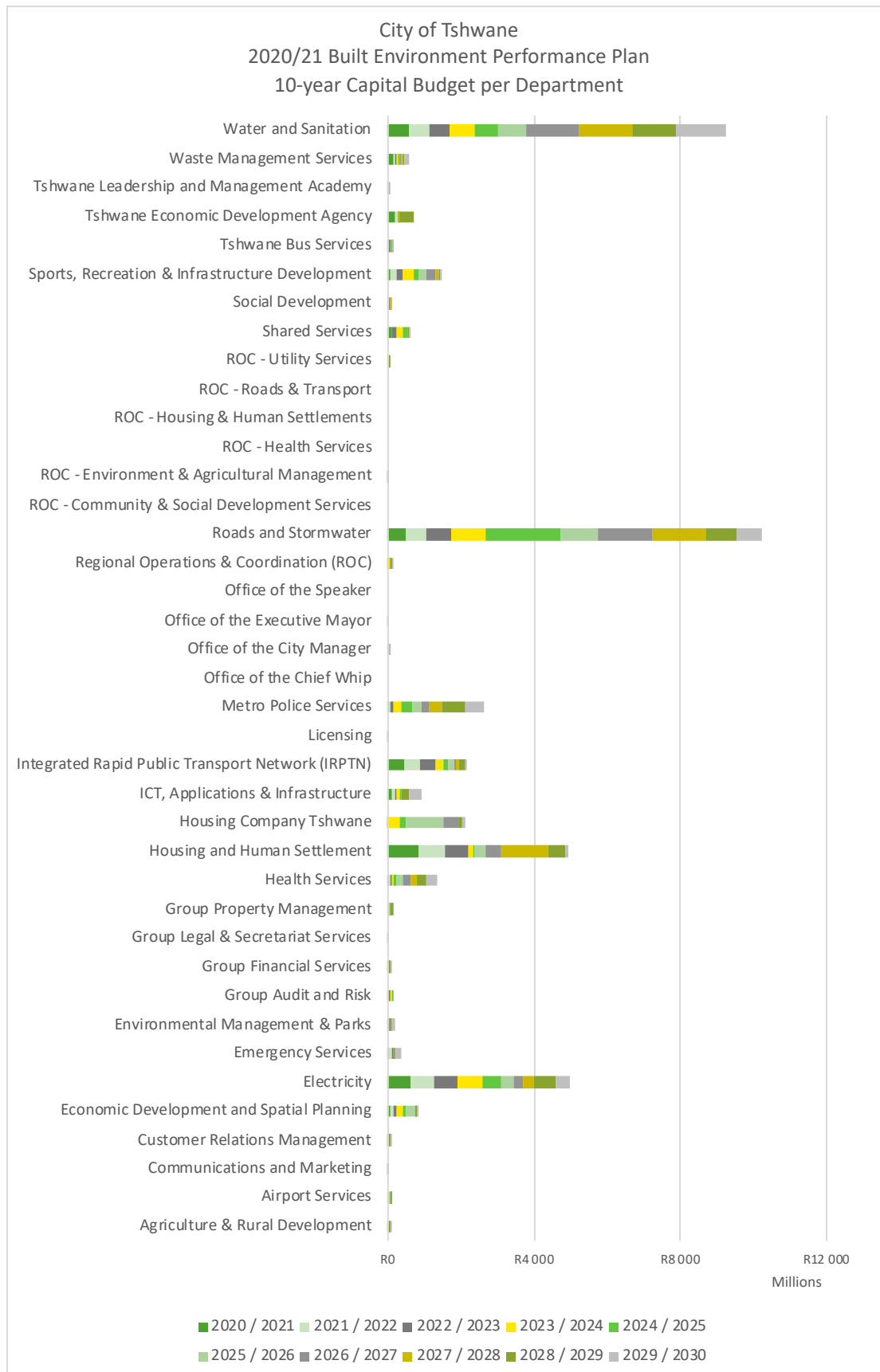




Table 26 10-year 2020/21 Capital Budget Department (R'000)<sup>10</sup>

Department	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
Agriculture & Rural Development	R5	R7	R7	R2	R1	R0	R1
Airport Services	R0	R0	R0	R0	R0	R57	R35
Communications and Marketing	R4	R0	R0	R0	R0	R0	R0
Customer Relations Management	R0	R4	R4	R0	R0	R4	R0
Economic Development and Spatial Planning	R65	R89	R107	R147	R87	R263	R0
Electricity	R617	R637	R646	R674	R542	R333	R254
Emergency Services	R47	R50	R50	R6	R1	R1	R1
Environmental Management & Parks	R16	R9	R9	R7	R9	R1	R1
Group Audit and Risk	R25	R25	R25	R25	R25	R0	R0
Group Financial Services	R42	R1	R1	R0	R0	R0	R0
Group Legal & Secretariat Services	R0	R0	R0	R0	R0	R0	R0
Group Property Management	R0	R10	R10	R14	R10	R11	R0
Health Services	R50	R43	R0	R63	R78	R160	R232
Housing and Human Settlement	R855	R702	R662	R110	R35	R306	R442
Housing Company Tshwane	R1	R1	R1	R316	R194	R1 018	R416
ICT, Applications & Infrastructure	R117	R77	R57	R63	R64	R0	R0
Integrated Rapid Public Transport Network (IRPTN)	R455	R419	R438	R224	R105	R162	R65
Licensing	R0	R0	R0	R0	R0	R2	R0
Metro Police Services	R30	R30	R92	R231	R293	R257	R194
Office of the Chief Whip	R0	R0	R0	R0	R0	R0	R0

<sup>10</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Department	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
Office of the City Manager	R0	R0	R0	R0	R0	R23	R10
Office of the Executive Mayor	R0	R0	R0	R0	R0	R0	R0
Office of the Speaker	R0	R0	R0	R0	R0	R0	R0
Regional Operations & Coordination (ROC)	R2	R8	R5	R39	R6	R7	R2
Roads and Stormwater	R513	R551	R654	R952	R2 065	R1 030	R1 470
ROC - Community & Social Development Services	R0	R0	R0	R0	R0	R0	R0
ROC - Environment & Agricultural Management	R0	R0	R0	R0	R0	R1	R3
ROC - Health Services	R0	R0	R0	R0	R0	R0	R0
ROC - Housing & Human Settlements	R0	R0	R0	R0	R0	R0	R0
ROC - Roads & Transport	R0	R0	R0	R0	R0	R0	R0
ROC - Utility Services	R0	R0	R0	R0	R0	R11	R0
Shared Services	R110	R0	R150	R150	R150	R0	R0
Social Development	R0	R0	R0	R0	R0	R17	R40
Sports, Recreation & Infrastructure Development	R79	R162	R180	R275	R130	R237	R243
Tshwane Bus Services	R20	R20	R20	R20	R20	R0	R0
Tshwane Economic Development Agency	R189	R101	R1	R0	R0	R0	R2
Tshwane Leadership and Management Academy	R0	R0	R0	R0	R0	R0	R0
Waste Management Services	R172	R40	R40	R45	R50	R0	R20
Water and Sanitation	R568	R569	R544	R703	R652	R769	R1 439

Department	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
<b>Grand Total</b>	<b>R3 982</b>	<b>R3 554</b>	<b>R3 701</b>	<b>R4 066</b>	<b>R4 516</b>	<b>R4 667</b>	<b>R4 868</b>

Department	2027 / 2028	2028 / 2029	2029 / 2030	MTREF	Total	MTREF %	% of Total
Agriculture & Rural Development	R4	R33	R24	R18	R81	0,2%	0,2%
Airport Services	R0	R15	R0	R0	R107	0,0%	0,2%
Communications and Marketing	R0	R0	R0	R5	R5	0,0%	0,0%
Customer Relations Management	R15	R32	R11	R7	R69	0,1%	0,2%
Economic Development and Spatial Planning	R0	R23	R8	R260	R789	2,3%	1,8%
Electricity	R317	R592	R385	R1 900	R4 996	16,9%	11,2%
Emergency Services	R1	R62	R150	R147	R368	1,3%	0,8%
Environmental Management & Parks	R0	R69	R75	R34	R196	0,3%	0,4%
Group Audit and Risk	R0	R0	R0	R75	R126	0,7%	0,3%
Group Financial Services	R0	R16	R16	R43	R75	0,4%	0,2%
Group Legal & Secretariat Services	R0	R0	R0	R0	R1	0,0%	0,0%
Group Property Management	R0	R110	R0	R20	R165	0,2%	0,4%
Health Services	R167	R275	R285	R94	R1 354	0,8%	3,0%
Housing and Human Settlement	R1 276	R448	R95	R2 219	R4 931	19,8%	11,1%
Housing Company Tshwane	R0	R88	R95	R2	R2 128	0,0%	4,8%
ICT, Applications & Infrastructure	R0	R221	R313	R251	R912	2,2%	2,1%
Integrated Rapid Public Transport Network (IRPTN)	R65	R192	R35	R1 312	R2 160	11,7%	4,9%
Licensing	R0	R5	R12	R0	R19	0,0%	0,0%
Metro Police Services	R375	R603	R530	R152	R2 635	1,4%	5,9%

Department	2027 / 2028	2028 / 2029	2029 / 2030	MTREF	Total	MTREF %	% of Total
Office of the Chief Whip	R0	R0	R0	R0	R0	0,0%	0,0%
Office of the City Manager	R0	R0	R0	R0	R33	0,0%	0,1%
Office of the Executive Mayor	R0	R3	R3	R0	R6	0,0%	0,0%
Office of the Speaker	R0	R0	R0	R0	R0	0,0%	0,0%
Regional Operations & Coordination (ROC)	R0	R52	R55	R15	R176	0,1%	0,4%
Roads and Stormwater	R1 464	R849	R702	R1 718	R10 249	15,3%	23,1%
ROC - Community & Social Development Services	R0	R0	R0	R0	R0	0,0%	0,0%
ROC - Environment & Agricultural Management	R0	R15	R0	R0	R19	0,0%	0,0%
ROC - Health Services	R0	R0	R0	R0	R0	0,0%	0,0%
ROC - Housing & Human Settlements	R0	R0	R0	R0	R0	0,0%	0,0%
ROC - Roads & Transport	R0	R0	R0	R0	R0	0,0%	0,0%
ROC - Utility Services	R0	R1	R0	R0	R11	0,0%	0,0%
Shared Services	R0	R30	R30	R260	R620	2,3%	1,4%
Social Development	R40	R0	R0	R0	R97	0,0%	0,2%
Sports, Recreation & Infrastructure Development	R80	R32	R13	R421	R1 431	3,7%	3,2%
Tshwane Bus Services	R0	R10	R3	R60	R113	0,5%	0,3%
Tshwane Economic Development Agency	R16	R391	R0	R290	R699	2,6%	1,6%
Tshwane Leadership and Management Academy	R0	R27	R3	R0	R30	0,0%	0,1%

Department	2027 / 2028	2028 / 2029	2029 / 2030	MTREF	Total	MTREF %	% of Total
Waste Management Services	R25	R77	R115	R253	R585	2,2%	1,3%
Water and Sanitation	R1 429	R1 198	R1 389	R1 682	R9 260	15,0%	20,8%
<b>Grand Total</b>	<b>R5 272</b>	<b>R5 470</b>	<b>R4 348</b>	<b>R11 237</b>	<b>R44 443</b>	<b>100,0%</b>	<b>100,0%</b>

From the table above, the following is of importance to note:

- Within the total 10-year capital budget, three of the 39 departments have been allocated the highest percentage of the budget (55%) namely Water and Sanitation, Roads and Stormwater and Electricity.
- Key infrastructure departments have been allocated the majority of the MTREF capital budget (78.6%). Key infrastructure departments include Electricity (16.9%), Housing and Human Settlement (19.8%), Roads and Stormwater (15.3%), Water and Sanitation (15%) and Integrated Rapid Public Transport Network (IRPTN) (11.7%).
- The flattening out of capital budget in the outer year of the 10-year horizon, highlights a concern towards future planning of the City's capital planning process.

## 19 Resourcing the Metro's Project Pipeline (Spatial Budget Mix)

Section B of this document outlined the identification of spatially transformation areas, based on the city's MSDF and Integration Zones. Given that the GSDF 2030 identifies the importance of existing spatially targeted areas on a municipal level, the areas of focus suggest a strong alignment and inclusion of the nodes and corridors outlined in the MSDF together with the resultant CLDPs.

The following section will take all the spatial transformation areas and analyse the current 10-year capital budget with these areas. Additionally, the need to understand the capital budget based on the administrative boundaries to strengthen the ability to report capital investments by Region and Ward. The IDP requires the capital budget to be expressed based on Regions and Wards. The alignment of the capital budget to the IDP is necessary from an administrative perspective, regarding reporting and administration of the City.

The total 2020/21 MTREF Capital Budget analysis indicates that R2,6 billion (24%) of the MTREF budget is allocated to non-spatially targeted capital projects. Non-spatial capital projects are projects classified according to MSCOA as City Wide or Administrative HQ<sup>11</sup>. The 2020/21 MTREF comprises of 231 projects, of which 76% is spatially mapped and the total 10-year Capital Budget has an additional 631 projects.

The total 10-year Capital Budget analysis indicates that R9.4 billion (21%) of the total budget is allocated to projects classified as City Wide or Administrative HQ. The spatial analysis of the capital

<sup>11</sup> Administrative HQ includes projects which have not been mapped spatially or projects which have invalidly been mapped outside of the City of Tshwane administrative boundary.

budget included below will refer to the spatial and non-spatial location of capital budgets by quoting MSCOA City Wide or Administrative HQ classifications.

## 19.1 Total Budget per Spatial Transformation Evaluation Criteria

### 19.1.1 Region

The regional capital analysis was undertaken by means of the Tshwane Capital Planning system (CaPS), which allows for spatial referencing and spatial querying of capital projects. Figure 74 and Table 27 shows the 2020/21 10-year Capital Budget per region.

Figure 74 10-year Capital Budget Per Region<sup>12</sup>

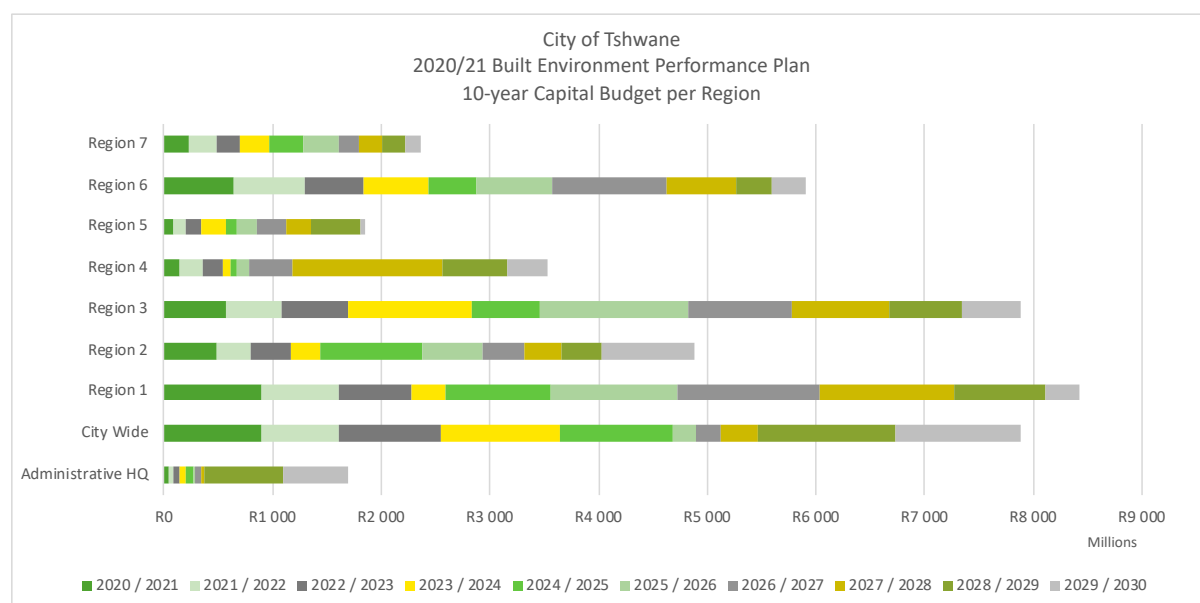


Table 27 2020/21 MTREF Capital Budget Regional Analysis (R'000)<sup>13</sup>

Regions	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
Administrative HQ	R37	R50	R58	R57	R63	R14	R68
City Wide	R891	R724	R936	R1 088	R1 041	R212	R227
Region 1	R903	R710	R662	R317	R959	R1 177	R1 311
Region 2	R479	R323	R360	R277	R934	R563	R387
Region 3	R569	R516	R605	R1 136	R640	R1 359	R956
Region 4	R150	R207	R186	R76	R46	R122	R396
Region 5	R91	R104	R142	R239	R89	R187	R276
Region 6	R636	R661	R536	R603	R436	R705	R1 056

<sup>12</sup> Administrative HQ includes projects which have not been mapped spatially or projects which have invalidly been mapped outside of the City of Tshwane administrative boundary.

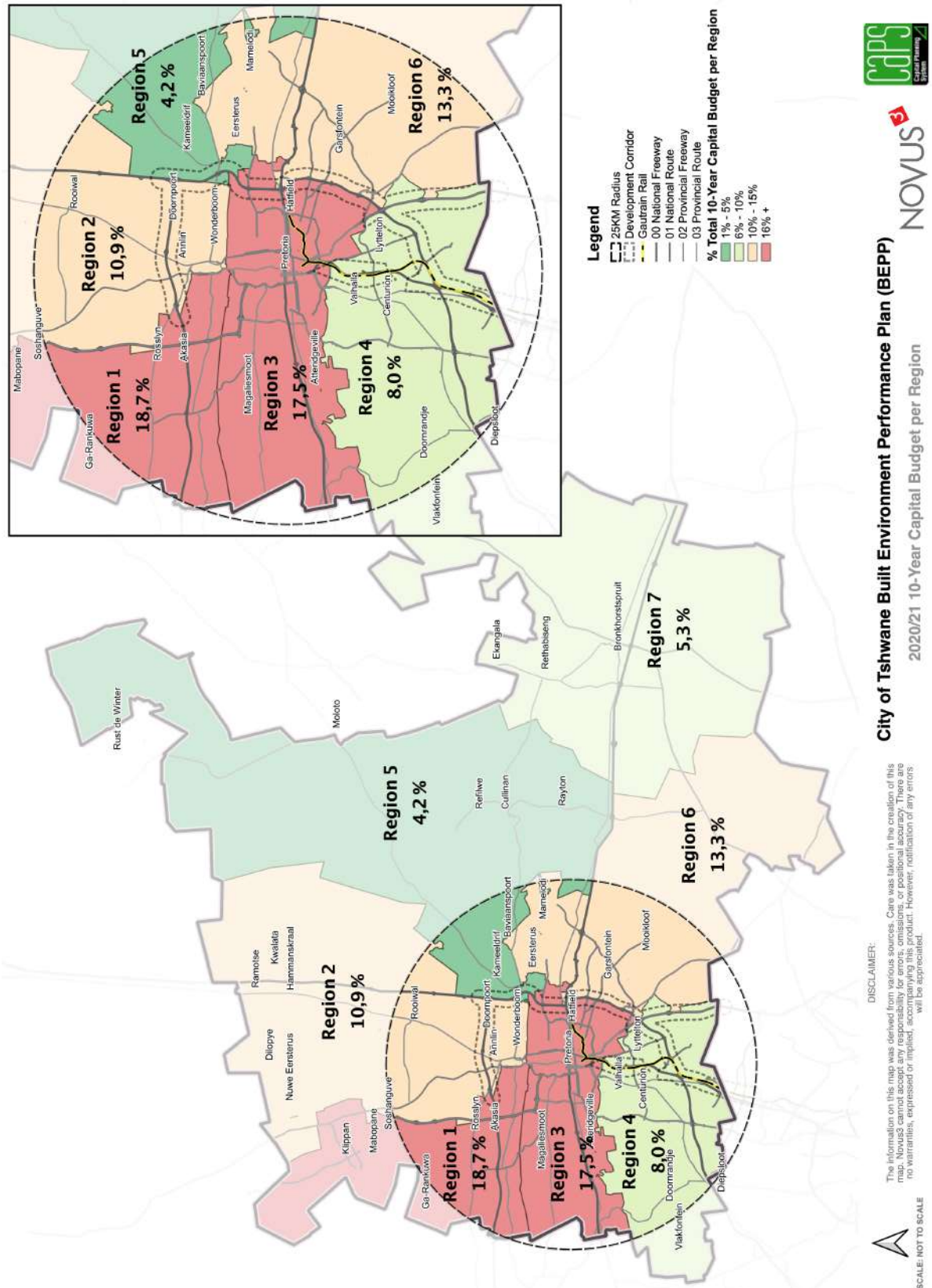
<sup>13</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.



Regions	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
Region 7	R226	R260	R215	R274	R308	R327	R190
<b>Grand Total</b>	<b>R3 982</b>	<b>R3 554</b>	<b>R3 701</b>	<b>R4 066</b>	<b>R4 516</b>	<b>R4 667</b>	<b>R4 868</b>

Regions	2027 / 2028	2028 / 2029	2029 / 2030	MTREF Total	Total	% MTREF	% Total
Administrative HQ	R28	R728	R590	R145	R1 693	1,3%	3,8%
City Wide	R343	R1 275	R1 149	R2 551	R7 884	22,7%	17,7%
Region 1	R1 226	R842	R316	R2 276	R8 424	20,3%	19,0%
Region 2	R332	R368	R866	R1 162	R4 889	10,3%	11,0%
Region 3	R889	R669	R548	R1 690	R7 887	15,0%	17,7%
Region 4	R1 377	R599	R375	R543	R3 534	4,8%	8,0%
Region 5	R227	R456	R44	R338	R1 856	3,0%	4,2%
Region 6	R641	R318	R322	R1 833	R5 913	16,3%	13,3%
Region 7	R210	R217	R138	R701	R2 364	6,2%	5,3%
<b>Grand Total</b>	<b>R5 272</b>	<b>R5 470</b>	<b>R4 348</b>	<b>R11 237</b>	<b>R44 443</b>	<b>100,0%</b>	<b>100,0%</b>

Figure 75 Spatial 2020/21 10-year Capital Budget per Region



From the table above, the following is of importance to note:

- A large portion of the 2020/21 MTREF capital budget (24% or R2.6bn) and 10-year 2020/21 capital budget (21.5% or R9.5bn) is non-spatially targeted (i.e. City-wide or Administrative Headquarters)
- Region 1, 2, 3 and 6 receive the largest portion of the capital budget, accounting for 62% of the total 2020/21 MTREF capital budget. Region 1 has been allocated the highest portion of the total 2020/21 MTREF capital budget at 20%, followed by Region 6 at 16% and Region 3 at 15%.

The IDP indicated that Regions 6, 3, 1 and 4 have a high number of residents without any electricity. The spatial targeted budget within these regions aligns with the identified areas to promote infrastructure investments by addressing the electricity for all infrastructure drive. Additionally, region 1 and region 6 were previously marginalised areas, and the boost of investments within these regions will provide these regions with better services, strengthening the City's vision to address pro-poor areas. Region 1 includes Rosslyn which has been identified as one of the City's priority investment areas in order to promote industrial development.

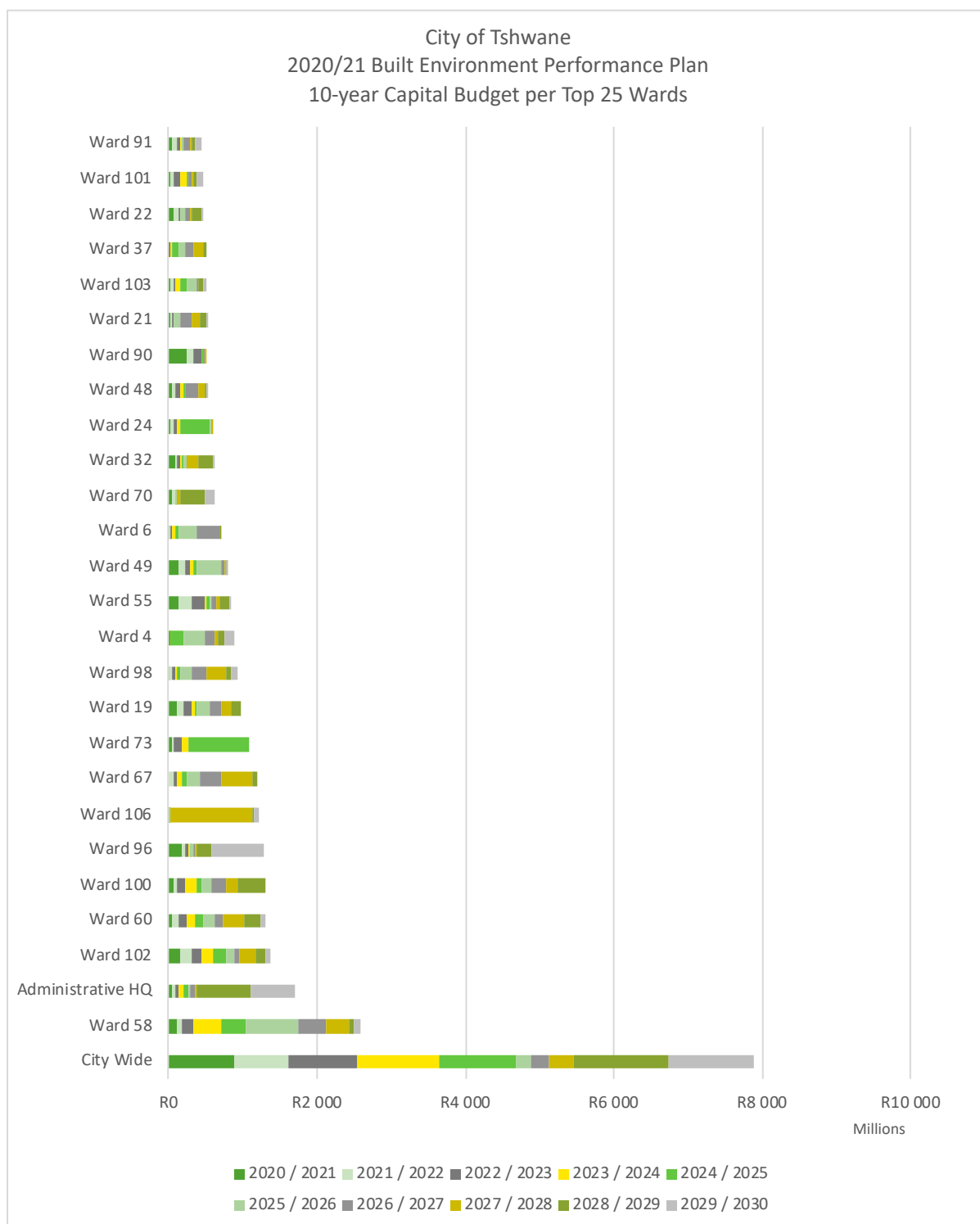
### **19.1.2 Top 25 Wards**

The 2020/21 MTREF capital budget analysis shows that Ward 55 receives the highest capital budget allocation (4%) in terms of the total MTREF (refer to Table 28). The top 5 wards which received the highest capital budget allocation in terms of the total MTREF includes Wards 55, 102, 90, 58 and 19, amounting to approximately R2bn or 18%.

Within the total 10-year 2020/21 capital budget the analysis shows that Ward 58 receives R1.3bn (6%) of the total 10-year 2020/21 capital budget. The ward-based capital expenditure analysis is an administrative view on the capital budget more than a spatially targeted lens, as ward demarcation is based on population per square kilometre.

The top 25 wards accounts for 49% of the total 10-year 2020/21 capital budget with the top 5 wards receiving 17% of the total capital budget.

Figure 76 10-year Capital Budget per Top 25 Wards Analysis<sup>14</sup>



<sup>14</sup> Administrative HQ includes projects which have not been mapped spatially or projects which have invalidly been mapped outside of the City of Tshwane administrative boundary.

Table 28 10-year Capital Budget per Top 25 Ward Analysis (R'000) sorted by 10-year budget<sup>15</sup>

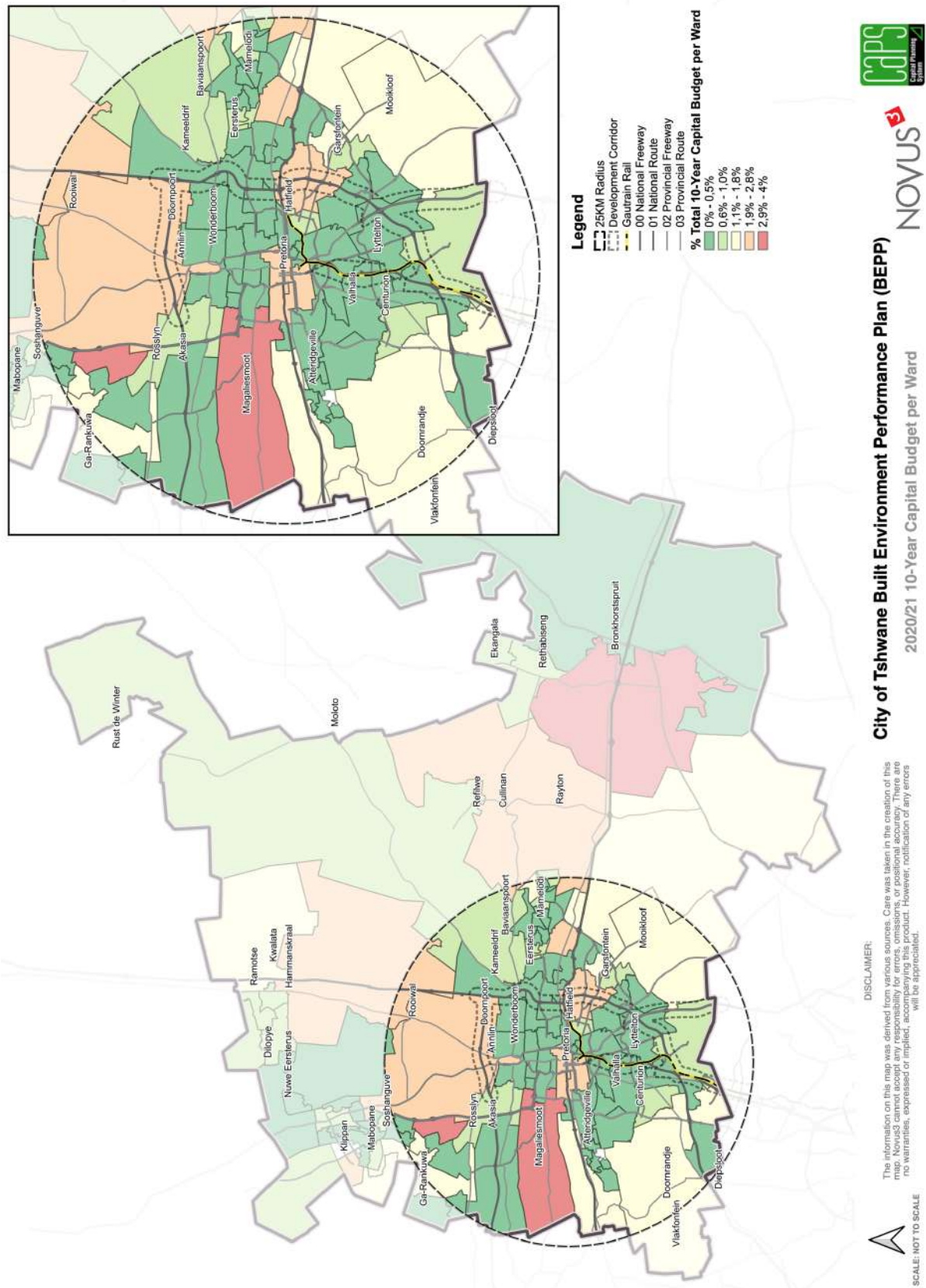
Wards	2020 / 2021	2021 / 2022	2022 / 2023	2023 / 2024	2024 / 2025	2025 / 2026	2026 / 2027
City Wide	R891	R724	R936	R1 088	R1 041	R212	R227
Ward 58	R112	R72	R139	R382	R336	R699	R388
Administrative HQ	R37	R50	R58	R57	R63	R14	R68
Ward 102	R146	R158	R148	R143	R183	R100	R75
Ward 60	R50	R84	R108	R114	R119	R135	R125
Ward 100	R57	R61	R100	R160	R60	R139	R189
Ward 96	R175	R44	R56	R5	R19	R32	R16
Ward 106	R2	R2	R2	R2	R2	R15	R0
Ward 67	R0	R60	R60	R60	R60	R185	R294
Ward 73	R35	R42	R92	R103	R803	R0	R0
Ward 19	R108	R100	R110	R30	R30	R173	R161
Ward 98	R10	R42	R44	R17	R53	R140	R196
Ward 4	R20	R0	R0	R11	R167	R290	R133
Ward 55	R135	R178	R168	R30	R33	R25	R65
Ward 49	R129	R86	R67	R58	R26	R350	R41
Ward 6	R5	R10	R20	R50	R53	R232	R313
Ward 70	R38	R46	R10	R7	R0	R13	R7
Ward 32	R87	R30	R30	R31	R32	R24	R11
Ward 24	R25	R45	R44	R50	R400	R3	R4
Ward 48	R35	R54	R65	R47	R12	R0	R188
Ward 90	R243	R97	R97	R16	R12	R4	R19
Ward 21	R23	R20	R20	R0	R0	R100	R137
Ward 103	R34	R29	R20	R77	R87	R127	R35
Ward 37	R4	R6	R6	R24	R93	R87	R117
Ward 22	R60	R68	R25	R0	R0	R60	R77
Ward 101	R20	R57	R87	R75	R27	R4	R35
Ward 91	R52	R51	R51	R16	R1	R25	R90
<b>Total</b>	<b>R2 531</b>	<b>R2 216</b>	<b>R2 563</b>	<b>R2 651</b>	<b>R3 710</b>	<b>R3 187</b>	<b>R3 009</b>
<b>Grand Total</b>	<b>R3 982</b>	<b>R3 554</b>	<b>R3 701</b>	<b>R4 066</b>	<b>R4 516</b>	<b>R4 667</b>	<b>R4 868</b>
<b>% Top 25 Wards Capital Budget</b>	<b>64%</b>	<b>62%</b>	<b>69%</b>	<b>65%</b>	<b>82%</b>	<b>68%</b>	<b>62%</b>

<sup>15</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Wards	2027 / 2028	2028 / 2029	2029 / 2030	MTREF Total	Total	MTREF %	Total %
City Wide	R343	R1 275	R1 149	R2 551	R7 884	23%	17%
Ward 58	R295	R81	R77	R322	R2 579	3%	6%
Administrative HQ	R28	R728	R590	R145	R1 693	1%	4%
Ward 102	R210	R139	R69	R452	R1 370	4%	3%
Ward 60	R284	R219	R75	R242	R1 313	2%	3%
Ward 100	R155	R380	R0	R218	R1 301	2%	3%
Ward 96	R20	R219	R706	R275	R1 291	2%	3%
Ward 106	R1 103	R30	R50	R5	R1 207	0%	3%
Ward 67	R419	R50	R0	R120	R1 188	1%	3%
Ward 73	R0	R0	R0	R169	R1 075	2%	2%
Ward 19	R124	R135	R0	R318	R970	3%	2%
Ward 98	R284	R48	R88	R96	R921	1%	2%
Ward 4	R34	R108	R125	R20	R887	0%	2%
Ward 55	R54	R136	R20	R482	R844	4%	2%
Ward 49	R12	R6	R6	R283	R783	3%	2%
Ward 6	R1	R0	R0	R35	R684	0%	2%
Ward 70	R43	R315	R150	R94	R629	1%	1%
Ward 32	R151	R195	R0	R147	R591	1%	1%
Ward 24	R4	R0	R0	R114	R575	1%	1%
Ward 48	R84	R20	R29	R154	R534	1%	1%
Ward 90	R30	R0	R0	R437	R518	4%	1%
Ward 21	R115	R91	R10	R63	R515	1%	1%
Ward 103	R0	R50	R47	R83	R506	1%	1%
Ward 37	R133	R30	R0	R15	R499	0%	1%
Ward 22	R30	R127	R25	R153	R471	1%	1%
Ward 101	R20	R56	R88	R164	R468	1%	1%
Ward 91	R35	R33	R95	R153	R447	1%	1%
<b>Total</b>	<b>R4 009</b>	<b>R4 468</b>	<b>R3 399</b>	<b>R7 310</b>	<b>R31 744</b>	<b>65%</b>	<b>70%</b>
<b>Grand Total</b>	<b>R5 272</b>	<b>R5 470</b>	<b>R4 348</b>	<b>R11 237</b>	<b>R44 443</b>	<b>100%</b>	<b>100%</b>
% Top 25 Wards Capital Budget	76%	82%	78%	65%	71%	65%	70%



Figure 77 Spatial 2020/21 10-year Capital Budget per Ward



### 19.1.3 MSDF Targeting

#### 19.1.3.1 City of Tshwane 2020/21 10-year Capital Budget Spatial Targeting by MSDF Element

The 10-year and MTREF 2020/21 capital budget spatial targeting analysis by MSDF spatial structuring elements, is shown in Figure 78 and Table 29 respectively.

Figure 78 10-year Capital Budget per MSDF<sup>16</sup>

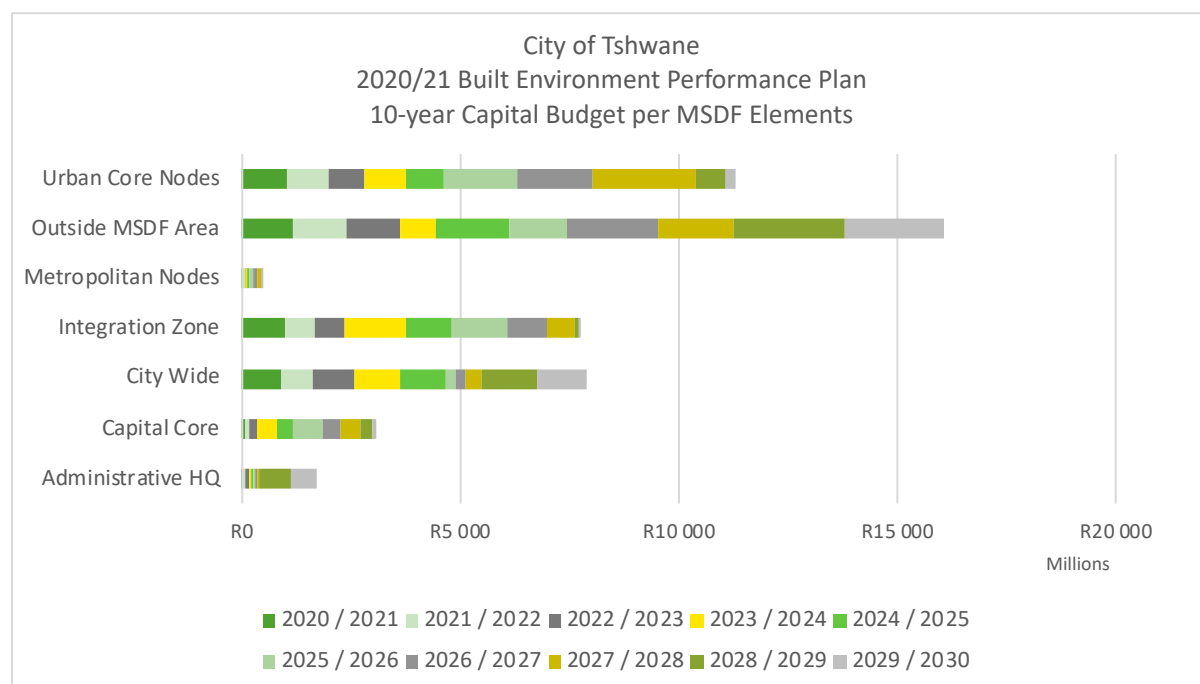


Table 29 MTREF Capital Budget MSDF Analysis (R'000)<sup>17</sup>

MSDF Elements	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF
Administrative HQ	R37	R50	R58	R145	1%
Capital Core	R60	R99	R176	R335	3%
City Wide	R891	R724	R936	R2 551	21%
Integration Zone	R987	R681	R674	R2 342	20%
Metropolitan Nodes	R32	R28	R27	R87	1%
Outside MSDF Area	R1 181	R1 216	R1 230	R3 627	30%
Urban Core Nodes	R1 015	R945	R849	R2 809	24%
<b>Grand Total</b>	<b>R4 202</b>	<b>R3 743</b>	<b>R3 949</b>	<b>R11 895</b>	<b>100%</b>

<sup>16</sup> Administrative HQ includes projects which have not been mapped spatially or projects which have invalidly been mapped outside of the City of Tshwane administrative boundary.

<sup>17</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Figure 79 Spatial 2020/21 10-year Capital Budget per MSDF Element



From the table and figure above, the following is of importance to note:

- The comparative budget analysis of the 2020/21 MTREF capital budget by MSDF nodal area indicates that the largest portion of the budget has been allocated to the Urban Core Nodes with a total of R2.8 billion (24%) of the total 2020/21 MTREF budget.
- The MSDF analysis shows that approximately R2,3 billion (20%) is within the Integration Zone for the total 2020/21 MTREF capital budget.
- A total of R3,2 billion (27%) of the 2020/21 MTREF budget is located within the Capital Core, Metropolitan Nodes and Urban Core Nodes.
- Only R87m (1%) of the 2020/21 MTREF capital budget is spatially targeted towards the Metropolitan Nodes.
- 30% of the spatially referenced MTREF capital budget does not align the above mentioned MSDF areas.

It is further noteworthy that

Figure 79 indicates a clustering of capital budget allocation outside the MSDF areas in the Magaliesmoot. This area comprises of housing and the IRPTN projects, within ward 58.

The 2020/21 MTREF capital budget partially aligns with MSDF elements with 47% of the capital allocated to the capital core, integration zone, metropolitan nodes and urban core nodes. The partial alignment of capital budget towards MSDF elements can be attributed to a number of factors of which one could include the inaccuracy of project location information. An additional factor could include the clustering of capital projects towards areas of high infrastructure backlog.

### 19.1.3.2 Gauteng 2020/21 MTREF Capital Budget Targeting per Tshwane MSDF Element

The Gauteng Province 2020/21 MTREF expected capital expenditure (ECE) spatial targeting analysis according to MSDF spatial structuring elements, is shown in Figure 80 and respectively Table 30.

Figure 80 Gauteng 2020/21 MTREF ECE per Tshwane MSDF (R'000)

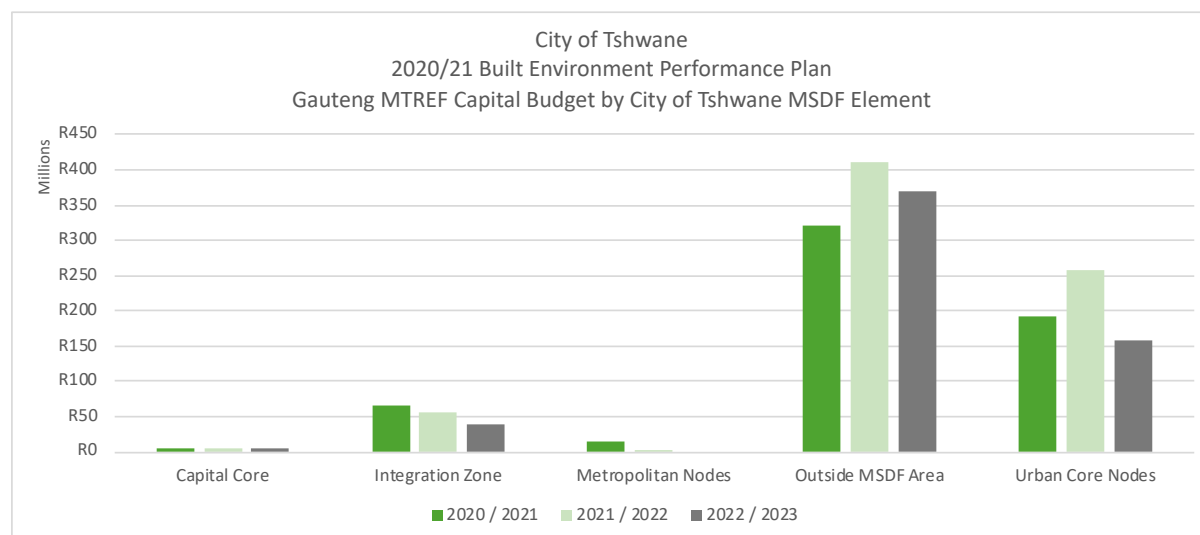




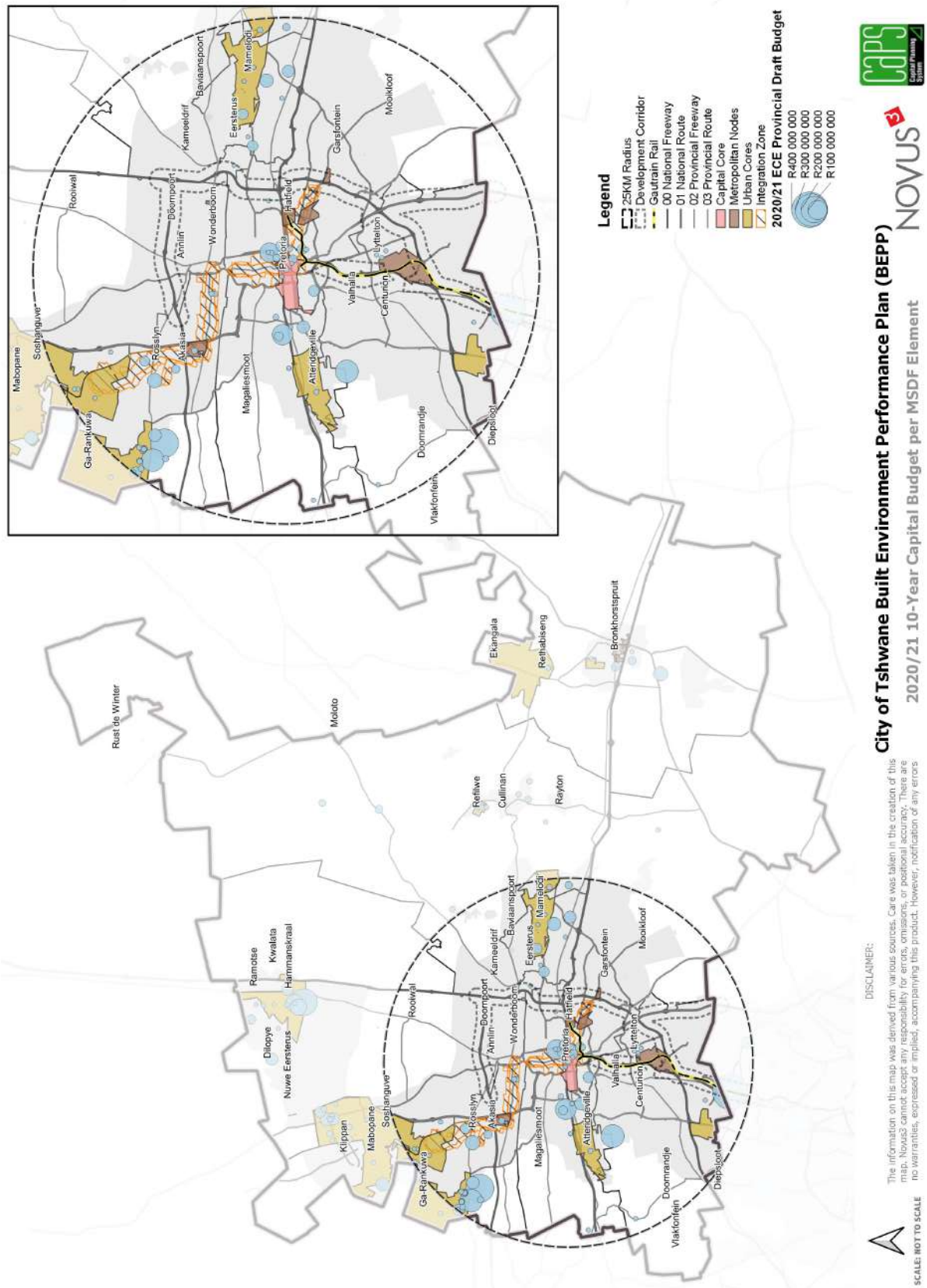
Table 30 Gauteng 2020/21 MTREF ECE per Tshwane MSDF (R'000)

MSDF / Provincial Department	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF
<b>Capital Core</b>	<b>R4</b>	<b>R4</b>	<b>R4</b>	<b>R12</b>	<b>0,6%</b>
Agriculture and Rural Development	R0	R0	R0	R0	0,0%
Education	R0	R0	R0	R0	0,0%
Health	R4	R4	R4	R11	0,6%
Human Settlements	R0	R0	R0	R0	0,0%
Roads and Transport	R0	R0	R0	R0	0,0%
Social Development	R0	R0	R0	R1	0,0%
Sports, Arts, Culture and Recreation	R0	R0	R0	R0	0,0%
<b>Integration Zone</b>	<b>R66</b>	<b>R56</b>	<b>R39</b>	<b>R161</b>	<b>8,5%</b>
Agriculture and Rural Development	R0	R0	R0	R0	0,0%
Education	R0	R0	R0	R0	0,0%
Health	R47	R54	R37	R137	7,2%
Human Settlements	R0	R0	R0	R0	0,0%
Infrastructure Development	R0	R0	R0	R0	0,0%
Roads and Transport	R0	R0	R0	R0	0,0%
Social Development	R4	R2	R2	R8	0,4%
Sports, Arts, Culture and Recreation	R16	R0	R0	R16	0,8%
<b>Metropolitan Nodes</b>	<b>R16</b>	<b>R0</b>	<b>R0</b>	<b>R16</b>	<b>0,8%</b>
Education	R0	R0	R0	R0	0,0%
Health	R0	R0	R0	R0	0,0%
Infrastructure Development	R0	R0	R0	R0	0,0%
Sports, Arts, Culture and Recreation	R16	R0	R0	R16	0,8%
<b>Outside MSDF Area</b>	<b>R322</b>	<b>R412</b>	<b>R371</b>	<b>R1 105</b>	<b>58,1%</b>
Agriculture and Rural Development	R0	R0	R0	R0	0,0%
Education	R0	R0	R0	R0	0,0%
Health	R321	R321	R292	R934	49,1%
Human Settlements	R0	R89	R78	R167	8,8%
Infrastructure Development	R0	R0	R0	R0	0,0%
Roads and Transport	R0	R0	R0	R0	0,0%
Social Development	R1	R1	R1	R4	0,2%
Sports, Arts, Culture and Recreation	R0	R0	R0	R0	0,0%
<b>Urban Core Nodes</b>	<b>R193</b>	<b>R257</b>	<b>R158</b>	<b>R608</b>	<b>32,0%</b>
Agriculture and Rural Development	R0	R0	R0	R0	0,0%
Education	R0	R0	R0	R0	0,0%
Health	R164	R136	R116	R416	21,9%
Human Settlements	R0	R94	R24	R118	6,2%
Infrastructure Development	R0	R0	R0	R0	0,0%
Roads and Transport	R0	R0	R0	R0	0,0%

MSDF / Provincial Department	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF
Social Development	R17	R16	R17	R51	2,7%
Sports, Arts, Culture and Recreation	R12	R11	R0	R23	1,2%
<b>Grand Total</b>	<b>R600</b>	<b>R729</b>	<b>R572</b>	<b>R1 901</b>	<b>100,0%</b>



Figure 81 Spatial Gauteng 2020/21 MTREF ECE per Tshwane MSDF (R'000)



The provincial allocation and planning of capital expenditure, in relation to the City of Tshwane's spatial priorities, can be better understood by cross referencing between provincial departmental capital budgets and each MSDF element as depicted in the table above. The following is of importance to note:

- 58% of the Gauteng ECE capital budget, allocated within the City of Tshwane, is located outside of the delineated MSDF areas.
- R607 million (32%) of the Gauteng ECE capital budget is allocated within the Urban Core Nodes.
- Gauteng capital budget investments within the City are from Health and is outside the MSDF Areas, with Education, Human Settlements, Social Development and Sports, totalling the large capital budget outside the MSDF areas at 9% of the total MTREF.
- The largest capital investment by Provincial department within an MSDF area is the Health department with R416 (4%) capital investment within the Urban Core Nodes.
- Although capital budget values are one way of measuring investments, the type of asset should also be taken into account and the purpose of the asset towards the area is another measure.

Provincial investment in comparison to investment made by the City within the MSDF nodes are significantly different. The portion of expenditure (7%) within the MSDF zones of Provincial capital in comparison to the portion of expenditure outside (11%) of the MSDF, suggests a different focus from to that of the City's vision.

## **19.2 Capital Expenditure Spatial Targeting by Catalytic Land Development Programme**

### **19.2.1 City of Tshwane 2020/21 MTREF Capital Budget Spatial Targeting per CLDP**

The 2020/21 MTREF capital budget spatial targeting analysis per Catalytic Land Development Programme (CLDP) area, is shown in Figure 82 and Table 31 respectively.

Figure 82 2020/21 MTREF Capital Budget per CLDP area (R'000)<sup>18</sup>

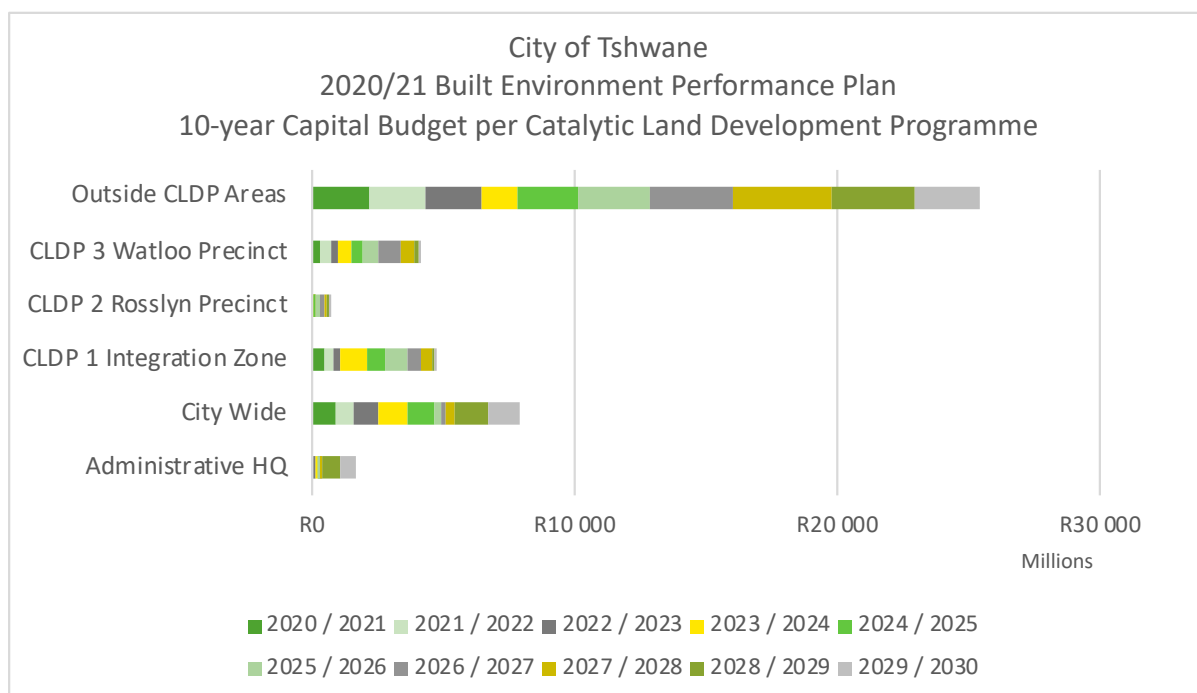


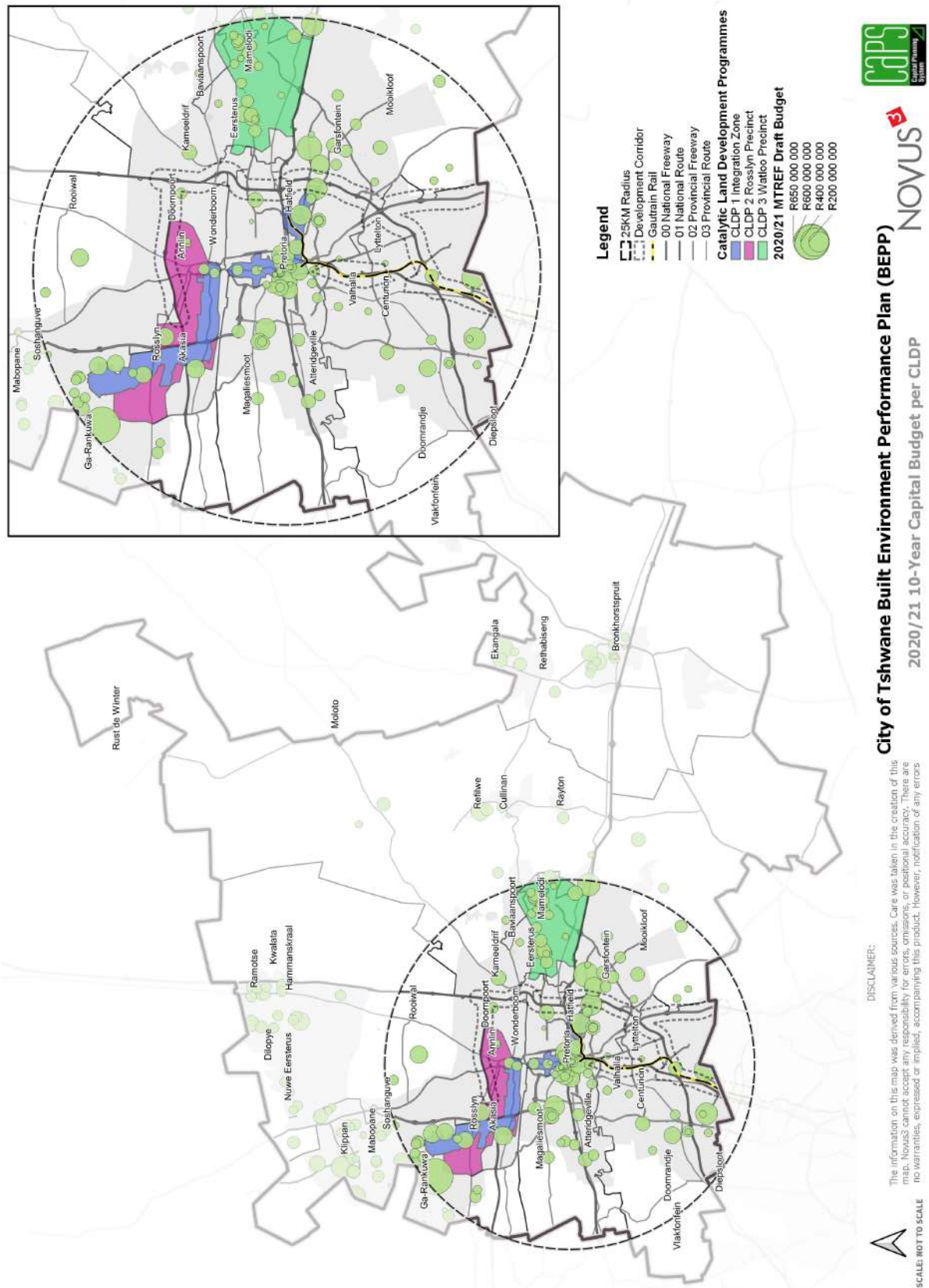
Table 31 2020/21 MTREF Capital Budget CLDP area (R'000)<sup>19</sup>

CLDP's	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF
Administrative HQ	R36	R48	R58	R142	1%
City Wide	R891	R724	R936	R2 551	23%
CLDP 1 Integration Zone	R501	R278	R338	R1 116	10%
CLDP 2 Rosslyn Precinct	R25	R6	R11	R42	0%
CLDP 3 Watloo Precinct	R342	R354	R296	R992	9%
Outside CLDP Areas	R2 199	R2 150	R2 069	R6 418	57%
<b>Grand Total</b>	<b>R3 994</b>	<b>R3 560</b>	<b>R3 707</b>	<b>R11 261</b>	<b>100%</b>

<sup>18</sup> Administrative HQ includes projects which have not been mapped spatially or projects which have invalidly been mapped outside of the City of Tshwane administrative boundary.

<sup>19</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Figure 83 Spatial 10-year 202/21 Capital Budget per CLDP area (R'000)



From the table and figure above, the following is of importance to note:

- The total capital budget allocated towards CLDP Zones is R2.1bn (19%) of the total 10-year 2020/21 capital budget.
- The flattening out of capital budget in the outer years within the 10-year horizon, highlights a concern towards future planning of spatially targeted areas within the City's capital planning process.

### 19.2.2 Gauteng 2020/21 MTREF Capital Budget Targeting per Tshwane CLDP

The Gauteng Province 2020/21 MTREF expected capital expenditure spatial targeting analysis per Catalytic Land Development Programme (CLDP) area, is shown in Figure 84 and Table 32 respectively.

Figure 84 Gauteng 2020/21 MTREF ECE per CLDP area (R'000)

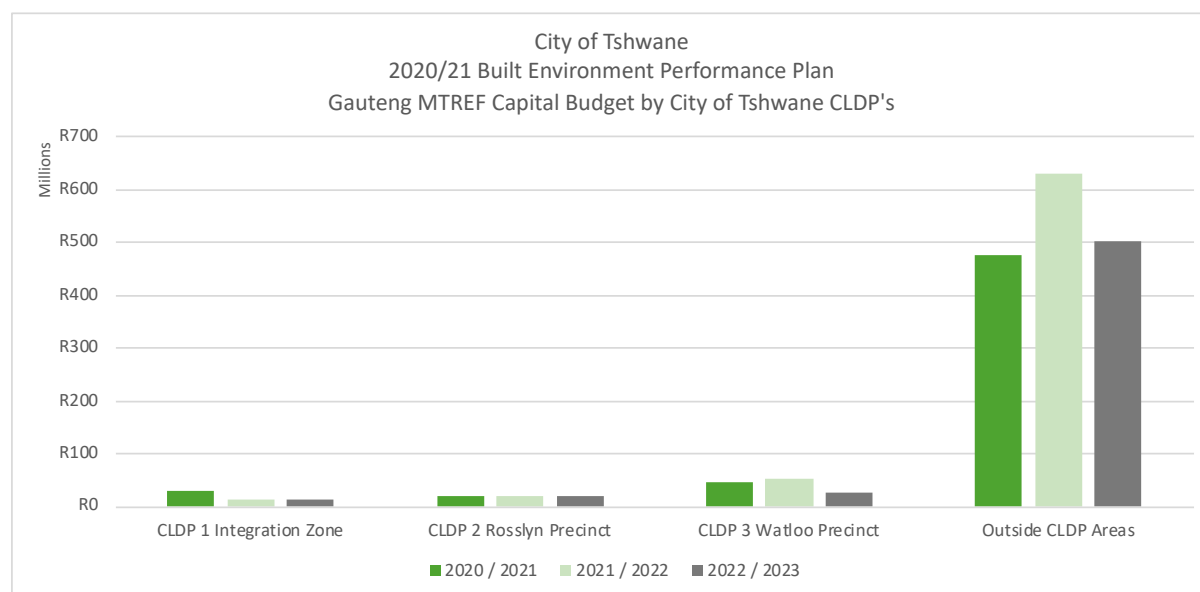
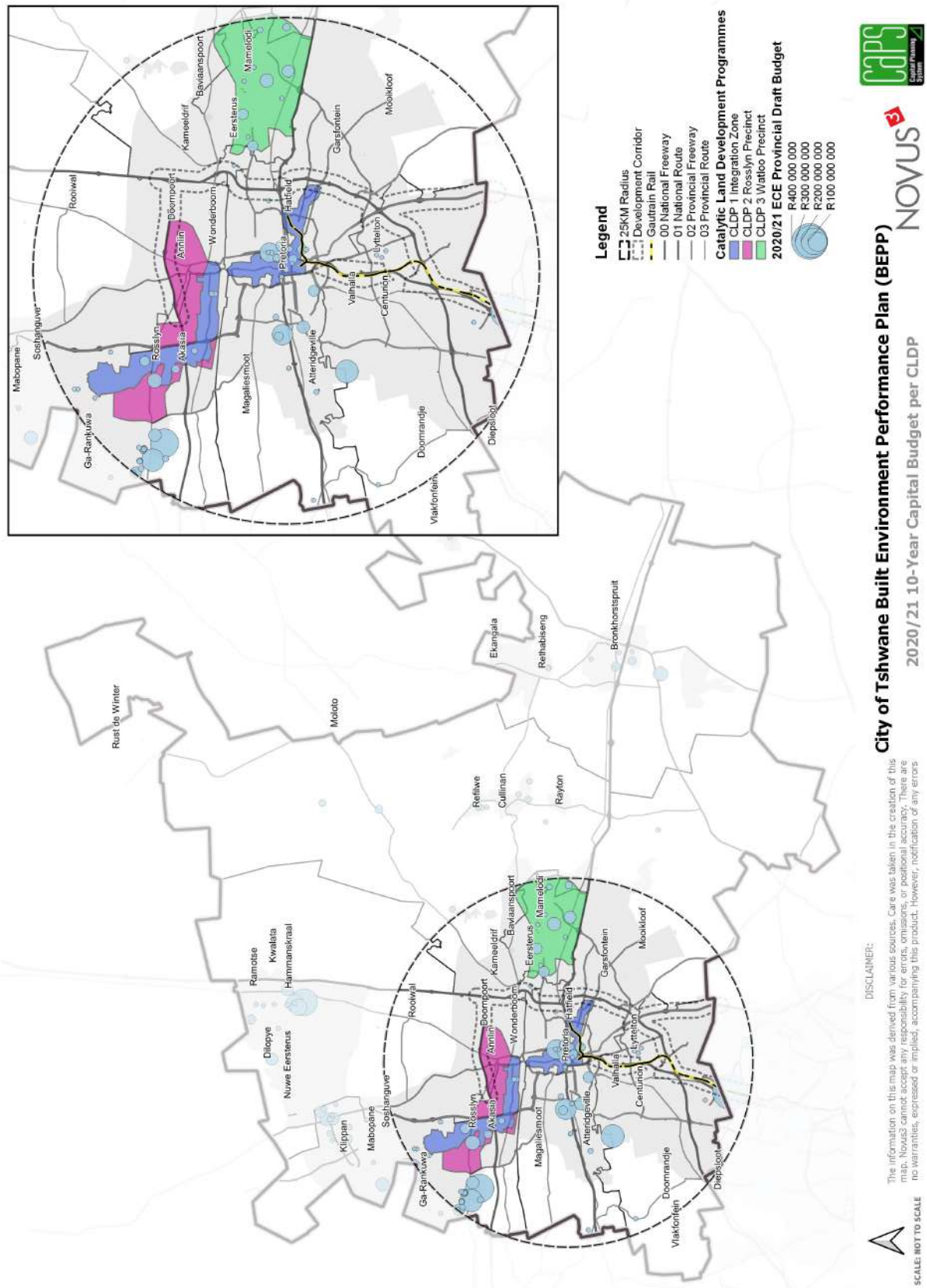


Table 32 Gauteng 2020/21 MTREF ECE per CLDP area (R'000)

CLDP Zones	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of Total MTREF
CLDP 1 Integration Zone	R29	R13	R13	R54	3%
CLDP 2 Rosslyn Precinct	R20	R20	R20	R60	3%
CLDP 3 Watloo Precinct	R46	R52	R27	R125	7%
Outside CLDP Areas	R477	R631	R501	R1 609	87%
<b>Grand Total</b>	<b>R571</b>	<b>R716</b>	<b>R561</b>	<b>R1 848</b>	<b>100%</b>



Figure 85 Spatial Gauteng 2020/21 MTREF ECE per CLDP area (R'000)



From the table above, the following is of importance to note:



- The total budget for Gauteng is R10 billion for the 2020/21 MTREF, within the City Gauteng's investment is only 12% of the budget and very evident from Figure 85 showing that most of the Gauteng Provincial budget is not spatially aligning with the CLDPs.
- From the total budget within the City, 88% of the total budget is outside the CLDP areas, with a minimal investment of R125 million (7%) in the Watloo / Silverton Precinct and collectively R101 million (5%) in the Integration Zone and Rosslyn / Wonderboom Precincts.

## 19.3 Total Budget per Asset Evaluation Criteria

### 19.3.1 Asset Type

The 2020/21 MTREF capital budget analysis by MSCOA asset classification, is shown in Figure 86 and Table 33 respectively.

Figure 86 2020/21 MTREF Capital Budget per MSCOA Asset Type

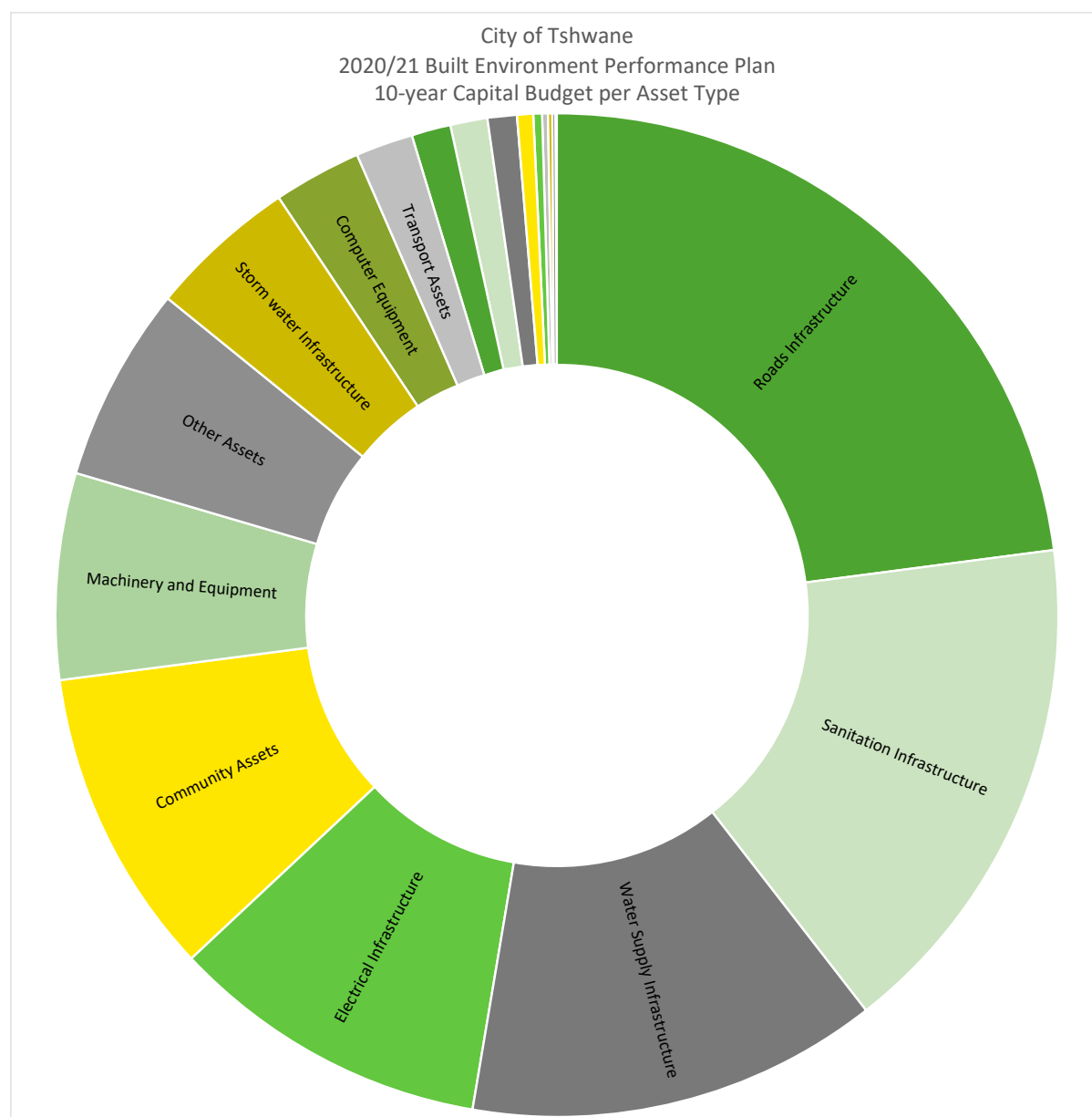


Table 33 2020/21 MTREF Capital Budget per MSCOA Asset Type (R'000)<sup>20</sup>

Asset Type	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF Total	10-year Total	% of Total
Biological or Cultivated Assets	R12	R12	R12	R35	0,3%	R75	0,2%
Coastal Infrastructure	R0	R0	R0	R0	0,0%	R15	0,0%
Community Assets	R246	R273	R272	R791	7,0%	R4 417	9,9%
Computer Equipment	R143	R87	R67	R297	2,6%	R1 256	2,8%
Electrical Infrastructure	R571	R630	R633	R1 834	16,3%	R4 559	10,3%
Furniture and Office Equipment	R16	R15	R16	R47	0,4%	R119	0,3%
Heritage Assets	R5	R5	R5	R15	0,1%	R60	0,1%
Information and Communication Infrastructure	R0	R0	R0	R0	0,0%	R522	1,2%
Intangible Assets	R0	R0	R0	R0	0,0%	R48	0,1%
Investment Properties	R188	R100	R0	R288	2,6%	R420	0,9%
Machinery and Equipment	R198	R101	R282	R581	5,2%	R2 961	6,7%
Other Assets	R106	R66	R64	R236	2,1%	R2 787	6,3%
Public Protection and Safety	R0	R0	R0	R0	0,0%	R0	0,0%
Roads Infrastructure	R1 191	R1 076	R1 157	R3 424	30,5%	R10 192	22,9%
Sanitation Infrastructure	R352	R333	R245	R930	8,3%	R7 324	16,5%
Solid Waste Infrastructure	R172	R40	R40	R253	2,2%	R575	1,3%
Storm water Infrastructure	R120	R134	R156	R409	3,6%	R2 138	4,8%
Strategic Management	R0	R0	R0	R0	0,0%	R10	0,0%

<sup>20</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Asset Type	2020 / 2021	2021 / 2022	2022 / 2023	MTREF	% of MTREF Total	10-year Total	% of Total
and Governance							
Transport Assets	R20	R60	R94	R173	1,5%	R810	1,8%
Water Supply Infrastructure	R642	R623	R660	R1 926	17,1%	R5 914	13,3%
Zoo's, Marine and Non-biological Animals	R0	R0	R0	R0	0,0%	R3	0,0%
No Selection	R0	R0	R0	R0	0,0%	R238	0,5%
<b>Grand Total</b>	<b>R3 982</b>	<b>R3 554</b>	<b>R3 701</b>	<b>R11 237</b>	<b>100,0%</b>	<b>R44 443</b>	<b>100,0%</b>

From the table above, the following is of importance to note:

- The largest benefactor of the 10-year 2020/21 capital budget is Roads infrastructure with R 10bn (23%); closely followed by Sanitation infrastructure with R7.3 bn (16.5%);
- The third largest benefactor of the 10-year 2020/21 capital budget is Water Supply with R5.9 bn (13%) followed by Electrical infrastructure with R4.5 bn (10%);
- The increase in Sanitation Infrastructure in the outer years, suggests the current priority of the city might not be towards Sanitation infrastructure but the need arises in the latter years;
- The 10-year 2020/21 capital budget allocation towards community assets (typically including libraries, community facilities etc.) with R4.4 bn (10%) of the total budget;
- A small allocation has been made to computer equipment and machinery and equipment, which fall within the moveable asset category, and;
- Concerning is the low budget allocation made to solid waste with R575 million (1.3%).

Infrastructure investment is the largest portion of the capital budget in the MTREF and in the 10-year Total budget. The significant decrease in road infrastructure from the MTREF at 30.5% to the 10-year budget at 23%, indicates the decrease in future infrastructure planning over the 10-year period.

### 19.3.2 Class Type

The 10-year 2020/21 capital budget analysis by MSCOA asset class, is shown in Figure 87 and Table 34 respectively.

Figure 87 10-year 2020/21 Capital Budget per MSCOA Asset Class (R'000)

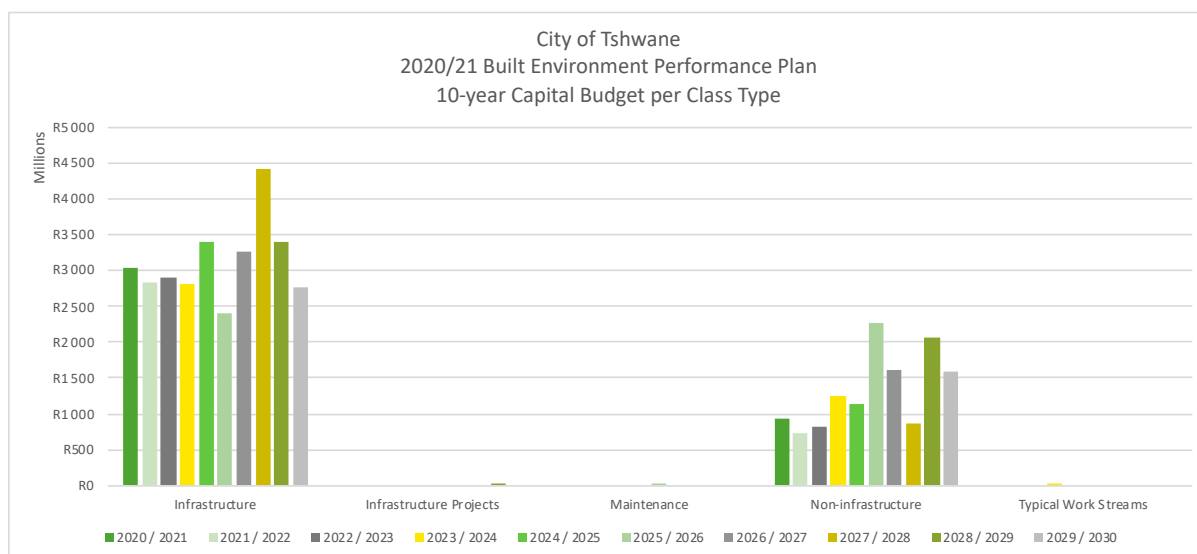


Table 34 10-year 2020/21 Capital Budget per Asset Class (R'000)<sup>21</sup>

Year	Infrastructure	Infrastructure Projects	Maintenance	Non-infrastructure	Typical Work Streams	Total
2020 / 2021	R3 048	R0	R0	R934	R0	R3 982
2021 / 2022	R2 836	R0	R0	R718	R0	R3 554
2022 / 2023	R2 891	R0	R0	R811	R0	R3 701
2023 / 2024	R2 813	R0	R0	R1 243	R10	R4 066
2024 / 2025	R3 391	R0	R0	R1 125	R0	R4 516
2025 / 2026	R2 405	R0	R5	R2 257	R0	R4 667
2026 / 2027	R3 263	R0	R0	R1 605	R0	R4 868
2027 / 2028	R4 417	R0	R0	R855	R0	R5 272
2028 / 2029	R3 410	R7	R0	R2 053	R0	R5 470
2029 / 2030	R2 760	R0	R0	R1 588	R0	R4 348
MTREF Total	R8 774	R0	R0	R2 463	R0	R11 237
<b>Grand Total</b>	<b>R31 232</b>	<b>R7</b>	<b>R5</b>	<b>R13 189</b>	<b>R10</b>	<b>R44 443</b>

From the table above, the following is of importance to note:

- Within the MTREF a total of R8 bn is allocated towards Infrastructure related projects, and non-infrastructure related assets at R2 billion of the total MTREF.
- The 10-year 2020/21 asset class budget is focused towards Infrastructure at R31 bn and non-infrastructure related assets at R13 bn.

<sup>21</sup> Draft version of the 2020/21 Annexure A (23 March 2020) was used to compile the affordability envelopes for the MTREF. These figures will be updated once the MTREF Capital Budget for 2020/21 has been finalized.

Infrastructure investment is dominant within the MTREF and the overall 10-year budget. Infrastructure assets are more costly than non-infrastructure asset and integrated planning and phasing should be taken into consideration to ensure all infrastructure investments are spatially aligning. The measure of impact on the budget should also be calculated with spatial targeting and collaborative capital investment as input to capital investment.

## 20 Institutional Arrangements

### 20.1 CaPS TTT Guidance

During the 2020/21 budgeting and reporting cycle, the CaPS TTT (refer to Section A) facilitated a number of focus sessions with departments to review and guide the project preparation process outlined in Section C. The objective of these focus session was to guide departments on the spatial and strategic priorities as outlined in the MSDF and IDP during the capital demand planning and capturing process.

The CaPS TTT hosted two rounds of one-on-one focus sessions with the following departments, which have been identified as key infrastructure and service delivery departments:

- Housing and Human Settlements;
- Roads and Transport;
- Water and Sanitation; and
- Electricity.

The first round of one-on-one sessions were held during September 2019 with the objective of communicating the budgeting and planning process for 2020/21 and to determine the planning directive within each department. These sessions also prepared departments for the capturing seasons by highlighting the information requirements and status of project information completion. In conclusion to the discussion the CaPS TTT made the department aware of common capturing errors and how to address these.

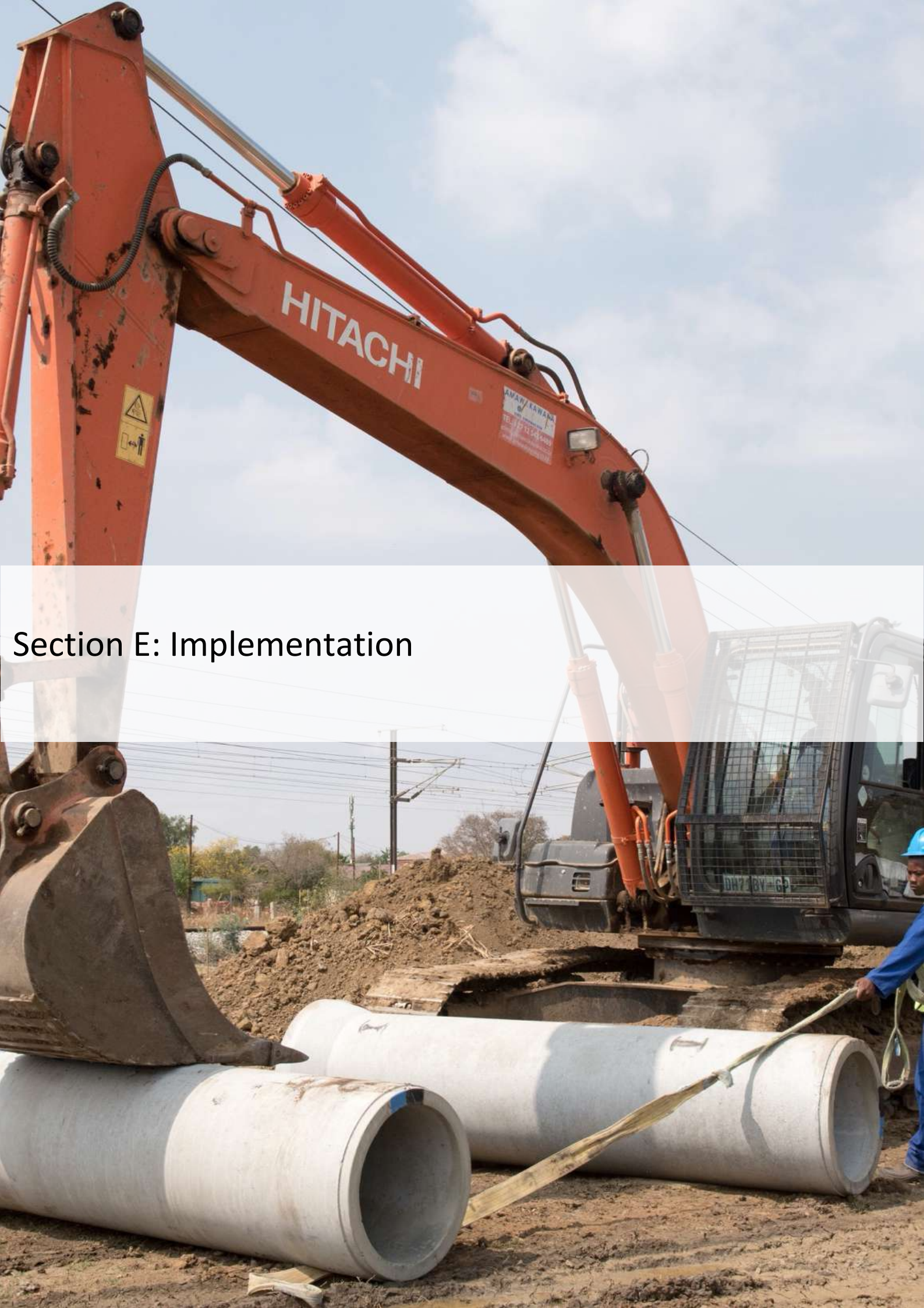
The second round of one-on-one sessions were held during October and occurred after the first capturing season. These sessions were targeted towards understanding the planning directive within each department and to guide departments to take note of the following:

- Status of project completion;
- CaPS TTT input towards the planning directive followed within departments;
- Guidelines on project planning which promotes climate change mainstreaming;
- Planning for the entire project lifecycle cost inclusive of pre-project and post-implementation operational costs; and
- Aligning to Catalytic Land Development Programmes and planning in line with the City's spatial targeting areas.

For purposes of the one-on-one sessions the CSU prepared a guideline on Climate Responsiveness and Resilience Strategic Outcomes. The agendas and guideline for round one and two of the one-on-one sessions have been included in Addendum 9.







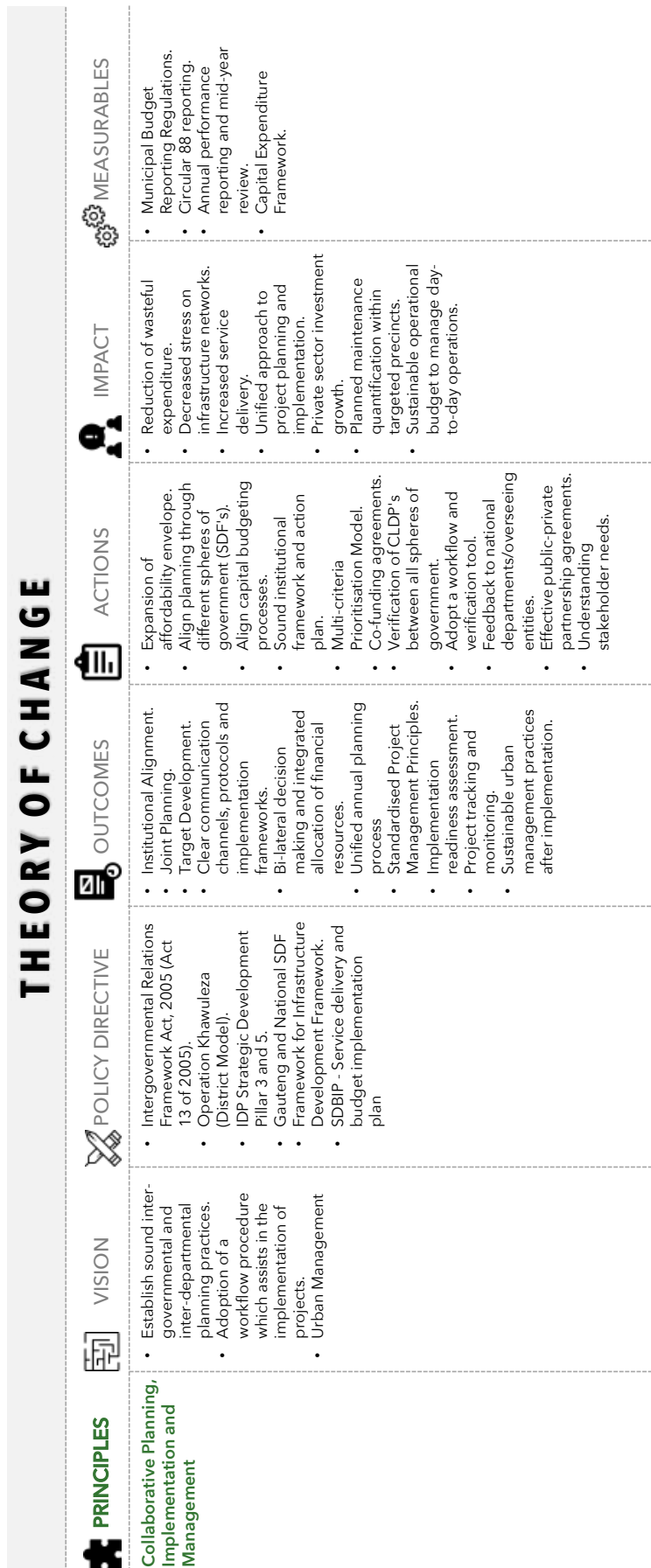
Section E: Implementation

## Section E: Implementation

Thus far, the content of the BEPP has focussed on first setting the scene for spatial transformation, identifying spatial targeted investment areas referred to as Catalytic Land Development Programmes (CLDP) and financing these investment portfolios using a sustainable mix of financial resources. Through the City Support Programme (CSP) process to date, an urgent need to implement prioritised and feasible projects within CLDPs have been realised in order to unlock private and household investments. The implementation of targeted capital investment projects should therefore align to structured procurement processes and mitigate risks associated with implementation readiness, cash-flow management, timing and quality of services rendered.

In terms of the City's Theory of Change, the principle of collaborative planning, implementation and management forms the central theme for the implementation of CLDPs. This principle support, and forms as an output, to sustainable financing and spatial transformation. As mentioned above, the process thus far aimed to answer the "where?" and the "why?", going forward the next focus should be implementing this to achieve the "how?". It is important to note that although the intra- and inter-dependency exists between spatial transformation and financial sustainability, sound governance processes should encompass these principles to achieve a measurable outcome on the ground.

Figure 88 Theory of Change



The principle of collaborative planning, implementation and management shapes the vision of adopting a workflow process which assist in the implementation of spatial targeted investments. The outcomes required to achieve this includes a unified and integrated annual planning and budgeting process together with a framework that guides the establishment of project implementation readiness; standardises project management protocol and monitors the execution of projects. Actioning these items requires the adoption of a reporting and monitoring tool in order to provide feedback to national departments and overseeing entities, as well as to influence decision making during the annual budgeting process.

In terms of the BEVC, the following section has been structured to align to the fourth component within the value chain and describes the process of institutional reforms and processes to track and evaluate project implementation.

The city identified the need to align project planning and preparation to project life-cycle governance, which includes the Framework for Infrastructure Procurement and Delivery Management (FIPDM) and the city's Stage Gate Standard and Workflow Process (which was derived in part from the FIPDM methodology). The information contained in Section E aims to outline the procurement approach within the City and includes a detailed assessment of the current procurement processes and reforms. The City operates primarily through organised forums and approval committees, which is outlined in Chapter 23. Reference will be made to the establishment of the Draft Stage Gate Standard and Workflow Process Guideline, which was adopted by Council on the 25<sup>th</sup> of April 2019, to facilitate aligned and integrated capital investment implementation within the City.

## **21 Project Lifecycle Planning and Implementation**

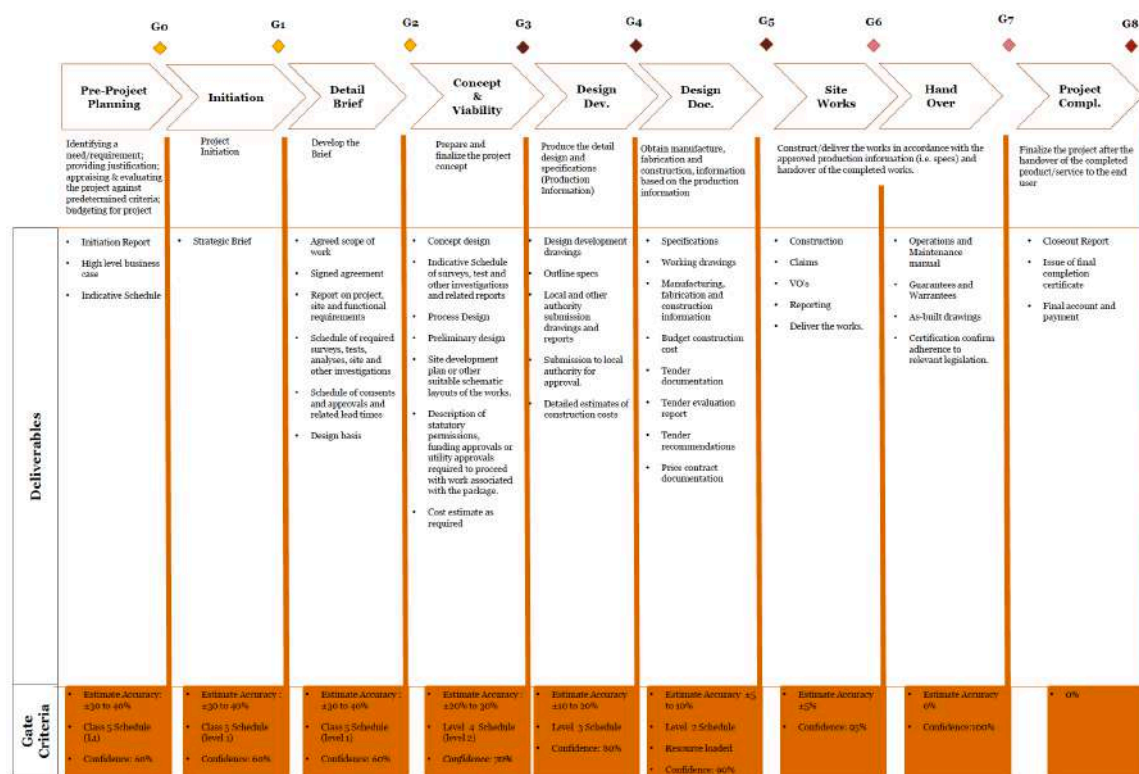
### **21.1 Framework for Infrastructure Procurement and Delivery Management (FIPDM)**

National Treasury has defined a framework outlining the lifecycle of infrastructure delivery, through the publication of the FIPDM. The adoption of FIPDM within the municipal space derives from instruction as outlined in Section 76(4)(c) of the Public Finance Management Act (PFMA) of 1999 (Act 1 of 1999). Furthermore, the FIPDM forms an integral part of the Model Supply Chain Management (SCM) Policy for Infrastructure Delivery Management, issued by National Treasury as a guideline document, establishing a standard for municipal supply chain management which conforms to Section 168 of the Municipal Finance Management Act (MFMA) (Act No. 56 of 2003) in support of Regulation 3(2) of the Supply Chain Management Regulations. Various organs of state should comply with the FIPDM framework which include national, provincial and municipal departments.

The FIPDM standard establishes a supply chain management system for infrastructure procurement and delivery management. The FIPDM framework consists out of stages and gates, of which each contain a number of key deliverables and gate criteria. Infrastructure planning initiates the FIPDM lifecycle and should clearly outline timelines, objectives, expected outcomes and cost. Figure 89 below outlines the FIPDM life-cycle phases, sub-phases and milestones or deliverables which would serve as documentary evidence that a particular life-cycle phase or sub-phase has been concluded.



Figure 89 FIPDM Project Life Cycle



The city has adopted the FIPDM framework, which forms part of the CAPS system. During project preparation, project life-cycle phases and sub-phases and budgets required per life-cycle phase and sub-phase are recorded for each project in order to determine the stage of the project (refer to Chapter 13.2). Together with implementing the FIPDM, the city has established a Stage Gate standard and workflow process guideline which aligns to the principles as established within the FIPDM. The content below provides an overview of the Stage Gate Standard adopted within the city, together with the alignment to the FIPDM framework.

## 21.2 City of Tshwane Stage Gate Standard and Workflow Process

The city has established a Stage Gate standard and workflow process which aims to assist in the identification, strategic alignment, prioritisation, budget approval and execution of all capital projects within the city. In order to support this process, the CAPS system has been configured to facilitate the Stage Gate standard and workflow as part of the annual capital budget preparation process (refer to Chapter 13.2). The following outlines the implementation of the Stage Gate standard and workflow.

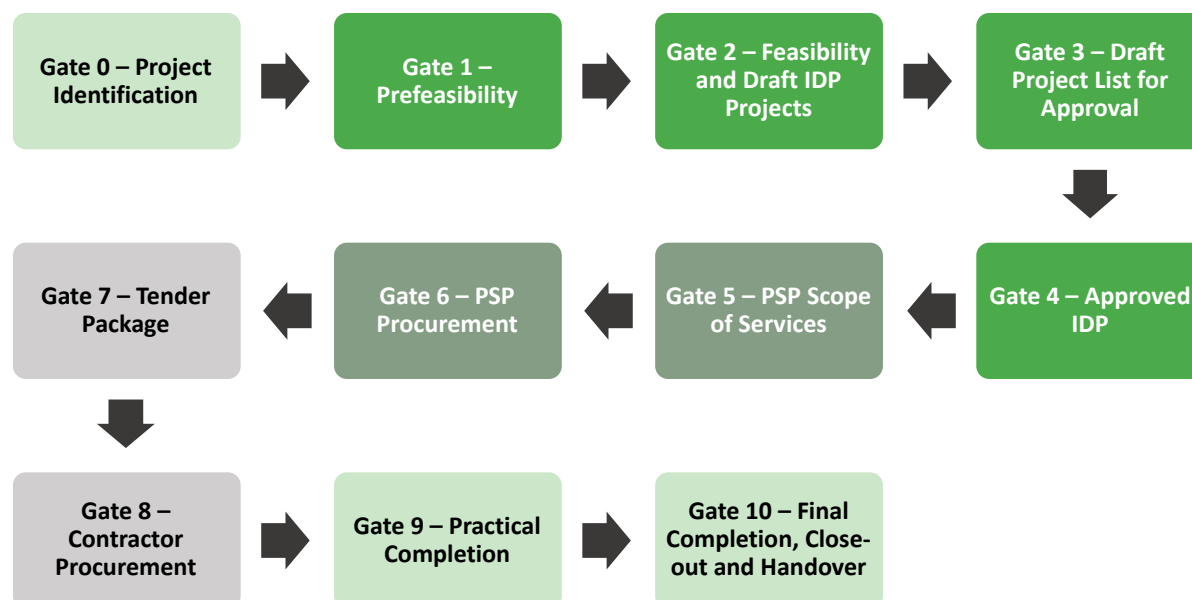
The project preparation process involves the evolution of capital projects from inception phase to close-out and is identified through a number of municipal strategies and economic or spatial priorities. The city has identified the need to implement effective tools and techniques in order to apply sound project management practices which aligns to the FIPDM framework as discussed above. The following section will provide an overview of the city's Stage Gate standard together with the alignment thereof to the FIPDM framework. Chapter 23 outlines the institutional arrangements with reference to the implementation and management of the Stage Gate standard and workflow process.

### 21.2.1 Stage Gate Overview

The implementation of stage gate management aims to assist departments with the capability to ensure that project planning and execution is performed effectively and efficiently. In addition to the

above, stage gate implementation will provide a platform in which measurable information is recorded which allows for accurate reporting of monthly and quarterly deliverables. In order to achieve the above, the stage gate standard comprises of ten (10) stage gates as outlined in Figure 90.

Figure 90 Stage Gate Overview



Each stage gate has been designed, based on a set of objectives and deliverables which include the following:

- **Stage Gate 0 – Project Identification.** The objective for Gate 0 is to prepare a project list comprised out of candidate projects were identified from departmental master plans, community engagement and economic or spatial priorities within the city. In addition to the needs of the city, Gate 0 will cater for the identification of projects from inter-governmental stakeholders, including national and provincial departments.
- **Stage Gate 1 – Prefeasibility.** The objective for Gate 1 is to identify pre-feasibility needs within the master planning process. Through the implementation of Gate 1, the city aims to achieve integration between planning and the roll-out of bulk services. This process should guide technical departments towards the identification of pre-feasibility needs before requesting capital budget for project implementation.
- **Stage Gate 2 – Feasibility and Draft IDP Projects.** The objective for Gate 2 is to draft a list of projects for the Integrated Development Plan (IDP), which include project plans aligned to the SDBIP framework and improved high-level cost estimates. There projects should be subjected to a prioritisation model in order to ensure that selected projects align optimally to the city’s strategic, financial, socio-economic, technical and spatial / developmental objectives.
- **Stage Gate 3 – Draft Project List for Approval.** The objective for Gate 3 is to draft a project list for the annual capital works-plan of the city. Project plans for projects classified as Stage 3 should include monthly life-cycle phases, sub-phases, cash flows, milestones, budget deviation and procurement planning. During Stage 3 procurement plans should be drafted before the approval of the capital works plan. Once the project list has been approved, detailed procurement plans should be developed.



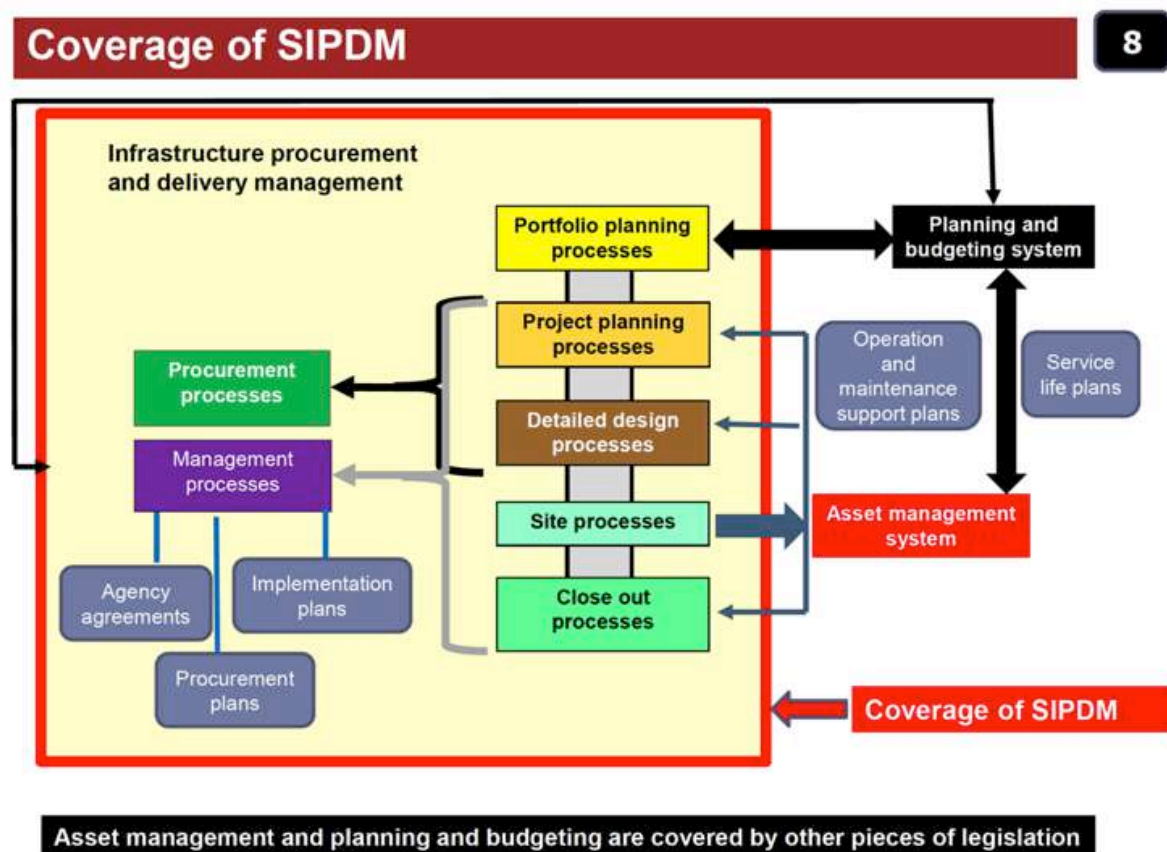
- **Stage Gate 4 – Approved IDP.** The objective for Gate 4 is to develop a capital works-plan for approval, based on the project list identified as part of Gate 3. During Gate 4, the Budget Steering Committee (BSC) evaluates the draft list of projects included within the capital works plan, which is ultimately submitted to Council for approval. The project list which results from this process then forms part of the annual IDP.
- **Stage Gate 5 – PSP Scope of Services.** The objective of Gate 5 is to generate a scope of services specification for the appointment of a professional service provider, which executes the design process. This stage coincides with the development of a Project Management Plan (PMP) and the opening of the project file.
- **Stage Gate 6 – PSP Procurement.** The objective of Gate 6 is to ensure the appointment of an appropriate and capable service provider for purposes of preparing preliminary and detail infrastructure designs. The execution of Gate 6 will assist SCM and departments to prepare and receive documentation which aligns to the correct format and standard of the city.
- **Stage Gate 7 – Tender Package.** The objective of Gate 7 is to ensure comprehensive designs and procurement specifications or documentation. This will provide increased potential for approval and use by SCM for procurement of an appropriate and capable contractor.
- **Stage Gate 8 – Contractor Procurement.** The objective of Gate 8 is to ensure the appointment of an appropriate and capable contractor. The execution of Gate 8 will assist SCM and departments to prepare and receive documentation which aligns to the correct format and standard of the city.
- **Stage Gate 9 – Practical Completion.** The objective of Gate 9 is to assist departments with the implementation and execution of projects. Gate 9 will assist and guide project managers to successfully execute and manage projects through the application of established tools and processes. Gate 9 ultimately aims to achieve successful practical completion.
- **Stage Gate 10 – Final Completion, Close-out and Handover.** The objective of Gate 10 is to advise and assist departments with the execution of the final completion phase through the provision of established tools, processes and procedures. Gate 10 includes the management of the snagging period, final inspection, issuing of the completion certificate and authorizing final payment and retention. This phase is also critical to mature projects from an “assets under construction” status to a capitalized asset listed on the fixed asset register of the city.

Each stage gate includes a detailed workflow process specifically designed to achieve the deliverables as described above. The workflow determines the progress of planning, approval and execution and has been designed to align to the complex municipal environment. For details pertaining to each Stage Gate’s established workflow, refer to the E-PMU Stage Gate Standard and Workflow Process Guideline which has been formally adopted by Council in April 2019.

## 21.3 Stage Gate Alignment to the FIPDM

Chapter 21.1 above outlined the FIPDM which consists of stages and gates, each containing a number of key deliverables and gate criteria (refer to Figure 89). The control framework and principles established within the FIPDM is outlined in Figure 91 below.

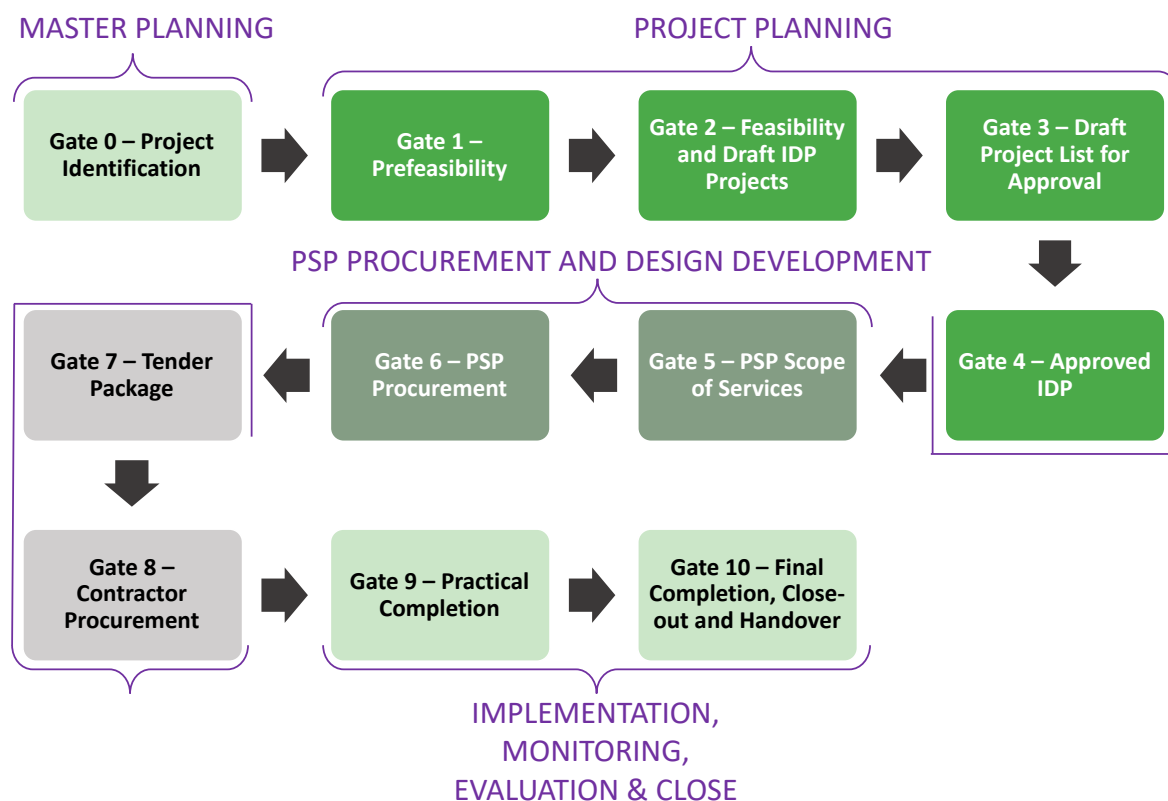
Figure 91 FIPDM Control Framework<sup>22</sup>



As mentioned above, the city's Stage Gate standard and workflow process has been based on the principles of FIPDM and conforms to the control framework. It is important to note that the principles within the FIPDM are conformed to business processes of the City of Tshwane and have been further contextualised by the city's Stage Gate standard and workflow process (refer to Figure 92 below).

<sup>22</sup> Framework for Infrastructure Procurement and Delivery Management (FIPDM), Application workshop (National Treasury 2016).

Figure 92 City of Tshwane Stage Gate Alignment to FIPDM control framework



Based on the synthesis between the city's Stage Gate standard and National Treasury's FIPDM, it is evident that the portfolio and project planning process occurs within Gate 1 – 4. The detail design process occurs within Gates 6 and 7 together with the SCM or procurement process, and the close-out process occurs within Gates 9 and 10. The procurement process, Gates 5 – 8, is discussed in further detail as part of Chapter 22 and aligns to the implementation stage of the BEVC.

The project identification process (Gate 0) was discussed in Chapter 13 and conforms to the project/programme preparation stage of the BEVC. Project Preparation within the city includes the capturing of a project wish-list (Gate 0) onto the CAPS system.

## 22 Current Procurement Approach

### 22.1 Standardized Bid Documents

In an effort to strive for uniformity and to assist user departments with the compilation of bid documents, the Supply Chain Management (SCM) Unit has drawn up standardized bid documents for various types of bids. The standardized documents listed below are available and should be requested by the user department prior to the compilation of a bid document.

Table 35 Construction Contracts

Document	Use
CIDB (GCC 2004)	Civil Engineering Construction Works
CIDB (GCC 2004 – EPWP)	Extended Public Works programme (EPWP) Civil Engineering Construction Works

Document	Use
CIDB (FIDIC)	Electrical and Mechanical Plant
CIDB (JBCC)	Building Construction Works
CIDB (NEC OPTION A)	Any Engineering work where a priced activity list is applicable

Table 36 Consultant Contracts

Document	Use
CIDB (PROFESSIONAL SERVICES)	Appointment of suppliers of professional services (remunerated by lump sum, percentage fee or hourly rates)
NEC (PROFESSIONAL SERVICES – OPTION A)	Appointment of suppliers of any professional services (remunerated by a priced activity list)

Table 37 Goods and Services

Document	Use
GOODS TENDER (Government Procurement GCC – 8 May 2007)	Supply of goods
SERVICE TENDER (Government Procurement GCC – 8 May 2007)	Supply of Services
NEC term service short contract	Appointment of a supplier for a period of time to manage and provide a service

Table 38 Other

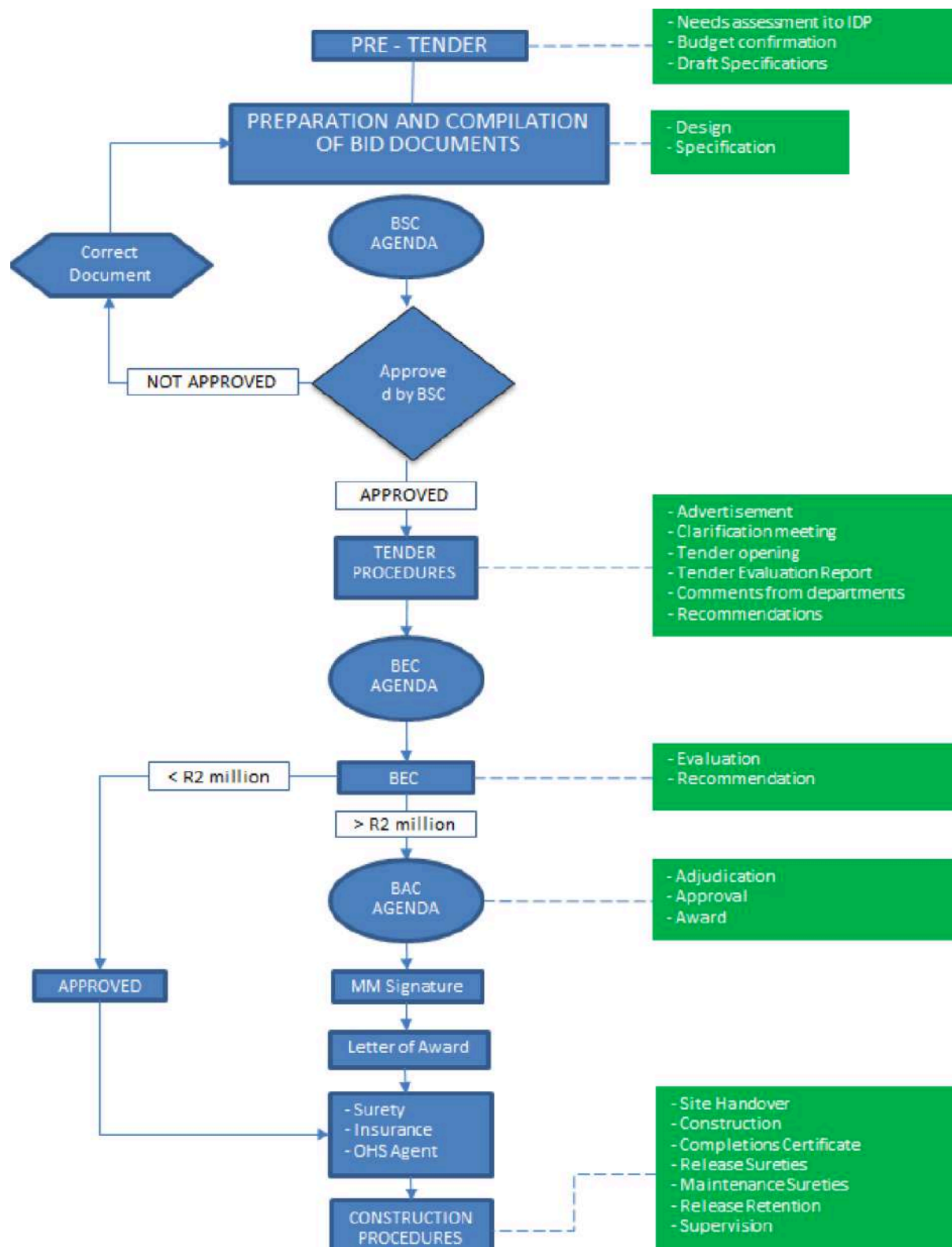
Document	Use
CALL FOR EXPRESSIONS OF INTEREST	EOI for the supply of any goods or services

The tables above indicate standardized BID documents which forms an integral part of the tender and award procedures. The next section outlines this process and is currently in place as per the City's supply chain management policy.

## 22.2 Tender and Award Procedures

This section describes and outlines the tender and award procedures as already defined in the municipality's supply chain management policy. The tender and award process are illustrated in Figure 93 and is described in the content to follow.

Figure 93 Tender and Award Process



### 22.2.1 Range of Procurement Processes

The initiation of a procurement activity is driven from the user department and follows the demand management process where:

- A needs assessment of the required goods and services is done;
- Economies of scale are investigated;
- Specifications are determined;
- Industry is analysed; and
- Requirements are linked to the approved budget programmed from with CoT's IDP.

The applicable procurement method for procuring goods and services depends on the transaction value as set out in the following table, and the SCM turnaround times are stipulated in calendar days from requisition to purchase order (PO).

Table 39 Range of Procurement Processes and Procurement Methods

Value of Purchase	Procurement Method	Timeline (from requisition to PO)
0 - R2 000	Petty Cash	1 day
R2 001 up to R10 000	Quotations	2 days
R10 001 up to R30 000	1 formal written and 2 other quotations in accordance with the Council approved procurement framework	3 days
R30 001 up to R200 000	3 (three) formal written price quotations and; complying with the MFMA; sealed and placed in box; advertise for 7 (seven) days on notice board and websites of Municipality; allocate in accordance with the points system	15 days (7 days Advertising on Notice Boards & 8 days Evaluation and Award)
Tenders from R200 000 up to R10 million and long term contracts	A competitive bidding process: advertised for at least 14 (fourteen) days on notice boards and website of City of Tshwane Municipality advertised for at least 14 (fourteen) days in newspapers commonly circulating locally but not limited thereto allocate in accordance with the points system	70 days (30 days Advertising on Notice Boards & 40 days Evaluation and award)
Tenders above R 10 million	A competitive bidding process: advertised for at least 30 (thirty) days in newspapers commonly circulating locally but not limited thereto (For Tenderers above R10 million) allocate in accordance with the Preferential points system	70 days (30 days Advertising on Notice Boards & 40 days Evaluation and award)



### **22.2.2 Pre-Tender Phase**

The user department has, in line with the Integrated Development Plan (IDP), determined that certain goods and services are required by the department and that the budget is available and confirmed. The user department will then prepare a specification or scope of work for the goods or services required. The specification (scope of work) can take various forms for instance:

- Specification for goods required such as wire, bolts and nuts, ballpoint pens, paper, etc.;
- Specification for services to be provided such as mowing of grass, street cleaning, professional services, etc.;
- Specification for civil, electrical or building construction projects; and
- Specification for Calls of Expressions of Interest.

Upon completion of the draft bid document, which includes the specification, the user department shall lodge the following to SCM for approval:

- 1 hard copy of the draft bid document; and
- 1 electronic copy of the draft bid document.

Once approved by the BSC, the following will be finalized by SCM with the user department:

- Date from which bid documents are available;
- Place, date and time of clarification meeting;
- Date and time until which bids will be accepted.

### **22.2.3 Tender Phase**

An official tender notice will and invitation to tender will be provided by SCM to the user department for inclusion in the final bid document after which copies of the final bid document will be made available by the user department.

The clarification meeting must be attended by a user department representative that is well versed with the bid, the particular Scope of Work and an attendance register of all persons attending the meeting and minutes of the meeting will be kept.

Bids will close on the date and time indicated in the tender notice at the Procurement Advice Centre and the tender prices will be ready out by an official of SCM.

### **22.2.4 Tender Evaluation Phase**

SCM will complete the administrative procedures, including the financial and preference adjudication, and compile a draft tender evaluation report. The draft tender evaluation report and bid documents are then forwarded to the user department for technical compliance evaluation.

On completion the documents and completed draft tender evaluation report must be returned to the SCM who will finalize and place it on the agenda to serve before the Bid Evaluation Committee (BEC).

The BEC will evaluate the tender evaluation report. If adjustments are required to the report or more clarity required concerning certain issues, the report will be sent back for adjustment.

On approval of the tender evaluation report by the BEC, either:

- For tender less than R2million: The recommended tender is accepted; or
- For tenders in excess of R2million: A recommendation is forwarded to the Bid Adjudication Committee (BAC).

The BAC will evaluate the tender evaluation report and recommendation from the BEC. If adjustments are required to the report of more clarity concerning certain issues, the report and recommendation will be sent back to the BEC for adjustment.

On approval of the tender evaluation report and BEC recommendation by the BAC, either:

- For tender less than R10 million: The recommended tender is accepted; or
- For tender in excess of R10 million: The Municipal Manager's approval is required

### **22.2.5 Tender Award Phase**

When a tender is awarded, SCM will draft a Letter of Award to the successful bidder. Depending on the type of goods or services procured the following administrative matters must be attended to.

- Construction Contracts:
  - The contract is reviewed by the Legal department and must be signed by the City Manager as the accounting officer;
  - Sureties and Guarantees must be lodged;
  - CoT Insurance and Risk Management must be informed of the award so that the necessary insurance can be put in place;
  - Occupational Health and Safety appointment must be made;
- For Goods and Services Contracts:
  - The contract must be signed (Confirm who signs);
  - Sureties and Guarantees must be lodged; and
  - Proof of Insurance by the Supplier must be presented.
- Professional Service Contracts:
  - The contract must be signed; and
  - Professional Indemnity Insurance by the Supplier must be submitted.

## **23 Institutional Arrangements**

### **23.1 Municipal Committees and Forums**

The City operates primarily through organized forums and approval committees which form part of the institutional framework pertaining to the implementation of Catalytic Land Development

Programmes (CLDPs). The following section has been structured to describe the composition and function of these committees or forums.

### **23.1.1 Council Committee**

The Council consists of 214 councillors, of whom 107 are ward councillors and 107 proportional representative (PR) councillors. The Members of the Mayoral Committee (MMCs) also form part of the Council.

The Council Committee is the highest approving committee in terms of its level of authority and the Committee will preside over project related matters and provide resolutions with the decisions taken within the Regulatory Framework of the City.

### **23.1.2 Mayoral Committee**

In terms of the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998), an executive mayor must appoint a mayoral committee from the elected councillors to assist him or her in executing the political mandate. Each with a different portfolio focusing on particular departments in the Municipality.

The Executive Mayor represents the face of the city and is responsible for managing all its affairs. The City of Tshwane accommodates over 2.2million people. Acting as a local cabinet, the Mayoral Committee is made up of 11 members, including the Executive Mayor, who is also its chairperson.

The Executive Mayor and the Mayoral Committee have a political responsibility for sound governance and effective service delivery. They are further responsible for promotion of economic growth and development, management of the city's physical development and promotion of the well-being of the community at large.

Their focus is also on safety and security, preservation of the city's natural and cultural resources and the strengthening of the city's national status as a capital.

### **23.1.3 Executive Committee**

The Executive Committee comprise of all Executive Directors that operates within the City of Tshwane, including but not limited to, Department Group Heads who are the responsible party to submit and present project submissions for approval within the level of authority defined for this committee.

### **23.1.4 Management Committee**

The Management Committee comprise of all Departmental Leaders that operates within a Department of the City of Tshwane. These members of this committee will include, but are not limited to, the Divisional Heads and Directors. The Department Project Manager are the responsible party to submit and present project submissions for approval within the level of authority defined for this committee.

### **23.1.5 Bid Specification Committee**

The Bid Specification Committee (BSC) must, on recommendation from a SED, finally approve the specifications for the procurement of goods or services by the municipality.

This occurs after a need to procure (demand management) have been identified and the user Department have duly submitted all information to the Bid Specification Committee. An approval by the BSC is required before the procurement process can proceed to the next step.

A bid specification committee must be composed of two or more officials of the municipality, preferably the manager responsible for the function of including external specialist advisors. No person, advisor involved with the bid specification committee, or director of such, may bid for any resulting contracts.

The user department should take note that the following attendance requirement for the BSC meetings:

- Project Initiator; and
- Relevant Director.

### **23.1.6 Bid Evaluation Committee**

The BEC is constituted for each project or procurement activity. The BEC evaluates the tenders or responses received from the market and recommends the suitable successful bidders. The BEC evaluates bids in accordance with:

- The specifications for a specific procurement; and
- The points systems as must be set out in the supply chain management policy of the municipality in terms of Regulation 27 (2) (f) and as prescribed in terms of the Preferential Procurement Policy Framework Act.

The BEC evaluate each bidder's ability to execute the contract and submits to the adjudication committee a report and recommendations regarding the award of the bid or any other related matter.

The user department should take note that the following attendance requirement for the BSC meetings:

- Project Initiator; and
- Relevant Director.

### **23.1.7 Bid Adjudication Committee**

The BAC considers the report and recommendations of the BEC, adjudicate and make a final award on how to proceed with the relevant procurement. The award can be in favour of the BEC recommendation. Should the BAC resolves that the committee is not in favour of the BEC recommendation, the tender will be referred back to the BEC, with comments, for re-evaluation.

In terms of award, the BAC must to do the following in terms of its delegation:

- Make a final award on tenders from above R200 000 to R10 million and make recommendation to the accounting officer to make the final award on tenders above R10 million; or
- Make another recommendation to the accounting officer how to proceed with the relevant procurement.

The user department should take note that the following attendance requirement for the BSC meetings:

- Project Initiator; and
- Relevant Executive Director.

### **23.1.8 Budget Steering Committee**

The role of the Budget Steering Committee is to provide technical assistance to the Mayor in terms of the Municipal Budget and Reporting Regulations. The prescribed membership of the committee emphasis the technical nature and role of the committee. It would usually include all senior manager within the municipality that needs to be involved in the IDP and budget processes to ensure that they are aligned and relate directly to the service responsibilities of the municipality.

The members of the committee are ultimately accountable for the implementation of the IDP and budget (3 year), and this occurs through the annual SDBIP and its performance targets.

The committee is chaired by the chief financial officer, or alternatively the municipal manager. The committee reviews the proposed budget annual prior to its approval. The committee also reviews the proposed budget adjustment, prior to its approval.

## **23.2 Sustainable Procurement**

The City of Tshwane became a member of the Global Lead City Network on Sustainable Procurement in 2016 and the Executive Mayor was requested to lead this network in 2018. The City's sustainable procurement journey started in October 2014, when the Office of the Executive Mayor held a high-level seminar with City stakeholders to establish a common understanding of sustainable procurement and what it would entail in the City as well as identifying low hanging fruit.

The next significant step was the development of our Sustainable Procurement Strategy and Sustainable Procurement Programme to manage the implementation of the strategy. The development of the strategy was facilitated through a City Task Team known as the Sustainable Procurement Integrated Team.

The Strategy has certain targets that need to be achieved by 2021. In terms of operational expenditure, we want to ensure that we replace as many products as possible with eco-certified alternatives – we would like to see at least a 10% greening of our stores. As far as capital expenditure is concerned, we want every new building to receive a minimum of a 4 green star rating and existing buildings to be certified to a minimum of 3 green star rating.







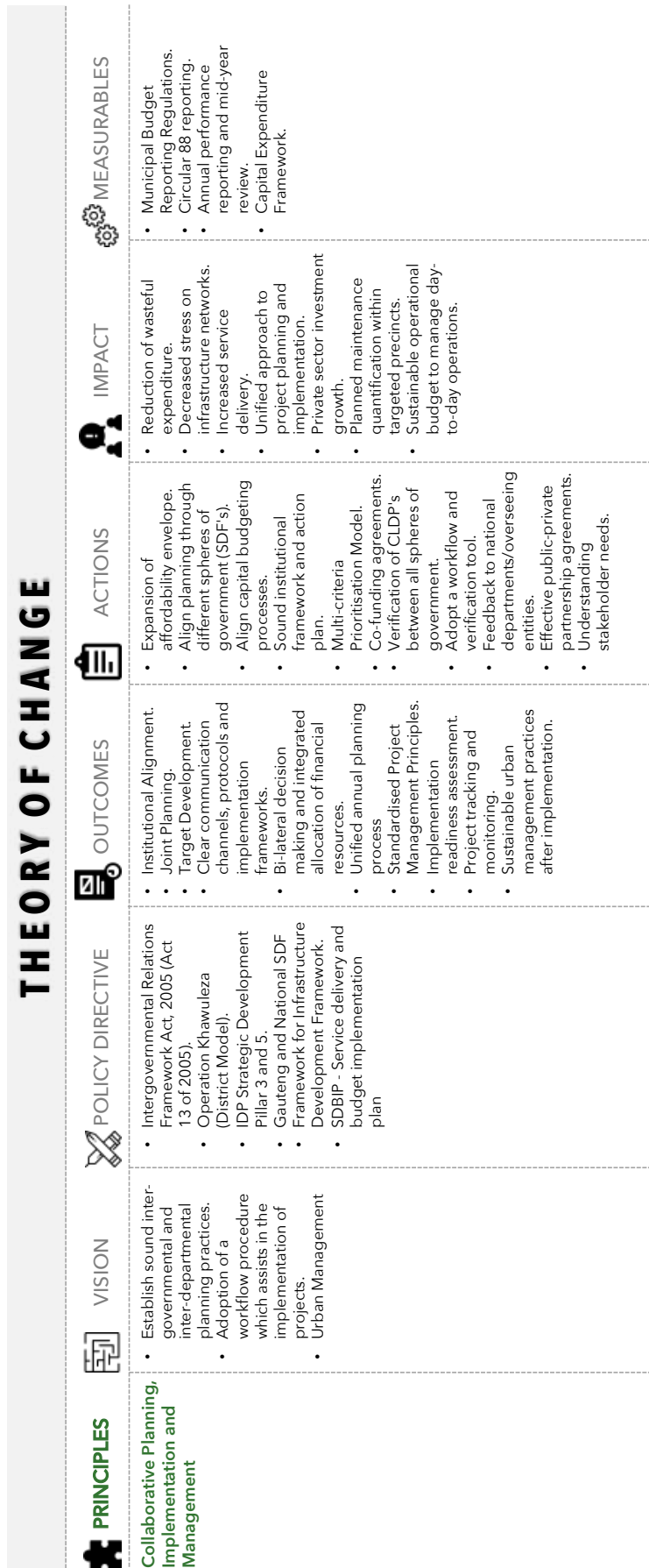
## Section F: Urban Management

## Section F: Urban Management

The concept of urban management maintains the ongoing business and operations within a Metropolitan. However, through the City Support Programme (CSP) the need to focus this approach to spatially targeted investment areas (CLDP) have been realised to maintain and grow investor confidence and continued investment momentum. Not only does this require the rendering of day-to-day services from the City, but it also requires a focussed approach to build private sector partnerships and a governance model which promotes marketing and social services.

In terms of the City's Theory of Change, the principle of collaborative planning, implementation and management forms the central theme for urban management specifically focussed within the CLDP framework. This principle is complimented by the spatial transformation principle, through actioning the establishment urban management frameworks, and the principle of financial sustainability through the provision of operational budgeting to support the rendering of day-to-day operations. It should also align to the vision of establishing sound inter-governmental and inter-departmental planning practices to promote bi-lateral decision making and integrated allocation of financial resources.

Figure 94 Theory of Change



The principle of collaborative planning, implementation and management shapes the vision of establishing an urban management framework which will further attract and sustain private investment and growth. The outcomes required to achieve this includes effective public-private partnership agreements specially targeted and designed to meet the needs representative of each CLDP. Actioning this requires an evaluation of stakeholder needs and an understanding of growth opportunities that will arise from the investment portfolio make-up, together with stakeholder and public relationships to efficiently manage and maintain precincts. This will ensure the establishment of precincts which align to the spatial vision of the City.

In terms of the BEVC, the following section has been structured to align to the last component within the value chain. Urban management deals with the “on the ground” workings within targeted precincts and includes planning, precinct management initiatives as well as institutional arrangements. This section will discuss the specific management steps taken by the City, above and beyond its regular functions, to ensure the (re)development of specific spatially targeted areas.

## **24 Precinct Management Planning**

### **24.1 Existing Precinct Management Plans**

There are several developed precincts plans that serves as special development and management plans in the relevant areas. The following precinct plans has been developed:

- Inner City Macro Framework
- Government Boulevard
- Ceremonial Boulevard
- Northern Gateway
- Salvokop
- Civic Precinct
- West Capital
- Mamelodi Hostels
- Saulsville Hostels
- Roslyn Industrial Park
- Mabopane Station Precinct
- Mamelodi DIPS

### **24.2 Establishing Precinct Management**

#### **24.2.1 Setting up Urban Management Units across The City of Tshwane**

Urban Management covers a range of issues from the maintenance of infrastructure, public buildings and spaces through to policing and marketing. The base objectives of urban management are to maintain public capital investments and to enforce basic rules of public life, with the ultimate

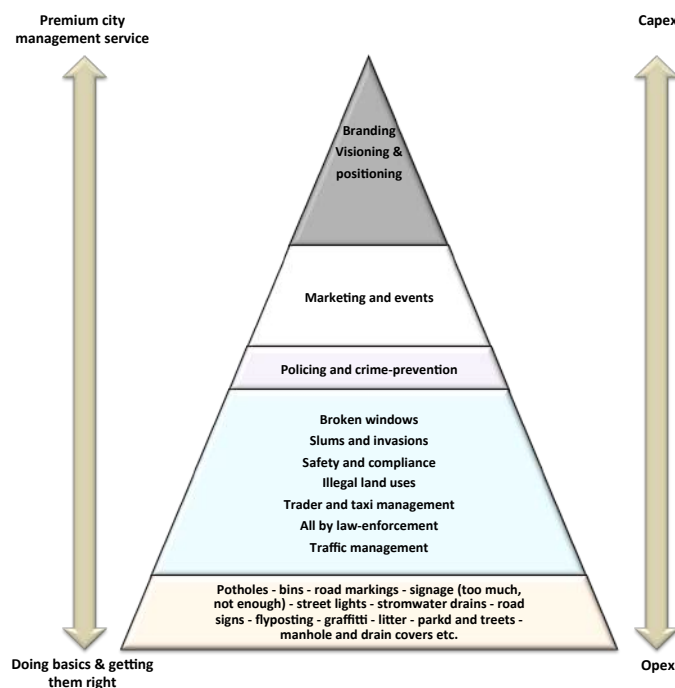


objectives relating to the contribution to an improved quality of life that effective urban management might bring to residents and other users of the space under management (Pernegger & Godehart, 2007). Figure 95 illustrates a structure of urban management explored in various municipalities.

The bottom level of urban management consists of simple maintenance issues such as cleaning of storm water channels, fixing potholes and removing litter. The second level deals with the enforcement of by-laws such as illegal dumping and informal trading. The third level is about policing and crime prevention. The highest levels are concerned with place, marketing the managed area to outsiders.

As one moves from 'getting the basics right' to offering 'a premium service', it is likely that operational budgets will require augmentation of capital items and would require the establishment of partnerships with the private sector, as explored above.

Figure 95 Structure for Urban Management



## 24.2.2 Funding Urban Management

Four strategies may be considered to secure the resources needed for improved management:

- **Strategy 1: Obtain value for money and efficiency gains.** A starting point for this type of strategy is to identify areas where public urban management resources are being wasted or where losses are being incurred.
- **Strategy 2: Increase the allocation of public resources.** This strategy is complementary to strategy 1. It aims to seek secure increased resource allocation to urban management functions. In this case, it may be considered to ring fence funds for the node areas.
- **Strategy 3: Capture complementary revenue streams.** A third mechanism for securing additional resources is to use public assets to generate revenue streams, which in turn are used to fund supplementary urban management activities. In strategies of this type, sustainable revenue streams are generated by the development of local public assets, such as the leasing of public land or facilities. All or part of this revenue can subsequently

be allocated to improve urban management activities (Urban Land Mark, 2009) – it should, however, be ensured that these funds are appropriately ring fenced.

- **Strategy 4: Mobilise urban management partnerships.** In this approach, the resources of actors in the private sector, nongovernmental organisations and community groups are mobilized into effective area-based public management partnerships. Urban management partners that are typically mobilised include:
  - Property owners;
  - Informal traders (contracting with trader’s associations or cooperatives to provide security cleaning, security and management services for informal markets);
  - Small businesses (formal/informal agreements to provide security and cleaning services for a precinct);
  - Taxi operators (contract with taxi associations to provide management and security services for taxi ranks);
  - Sports clubs (sport clubs provide maintenance service in turn for user rights);
  - Community groupings; and
  - Church or religious groups.

In this case, it can additionally be considered to outsource urban management functions to the private sector, cooperatives and community-based organisations. Improvement districts are typically considered in this instance, however, given the strong residential character of most of Tshwane this mechanism may not be appropriate and may need to be hybridised into a social/community organisation that is supported by the private sector through corporate social investment. With consideration of these complexities, it is recommended that a policy/framework to address urban management within the nodes be established. The framework should also be area specific, due to the diversity in Tshwane.

## 25 Institutional Arrangement

### 25.1 Aligning resources towards urban management and coordination

The City of Tshwane (CoT) has embarked on an augmented process of integrated budgeting which allows for conducting various “what-if” scenario analysis in order to enhance overall budget credibility, relevance and sustainability.

The results from the Budgeting Simulator© system (for each scenario conducted) will be utilised to inform and compile a multi-year CoT budget in which:

- Cognisance has been taken of historic trends and drivers of individual budget line items, based on audited historic financial information;
- Growth in individual budget line items as well as the interrelationship between budget line items have been analysed and considered;



- The Operating and Capital budget have been integrated and is therefore inclusive of the contemporaneous effects of both budgets;
- Ratio analysis has been conducted in terms of:
  - Operating and net cash flows;
  - Liquidity; and
  - Borrowing;
- The funding of both the Operating budget and the Capital budget have been analysed;
- Budget line items correspond to official Return Forms and is therefore reconcilable to mSCOA line items.

### 25.1.1 The Process

#### 25.1.1.1 Step 1: Preparation of a Status Quo forecast over a five-year planning horizon

The Status Quo forecast (SQ) provides a bird's-eye view of the forecast CoT financial position inclusive of:

- The current CoT policies and strategies as expressed in financial terms;
- The current CoT loan book (all long-term loans and bonds);
- The current CoT MTREF operating budget;
- The current CoT capital budget projects which are already committed and prioritised according to the output of the Capital Planning System, including the resultant effects on the:
  - Cash flows during the implementation period;
  - Operating budget upon and after implementation. The effect on depreciation is automatically included. Effects on other operating budget line items can be included on a project-by project basis, based on available pre-feasibility or feasibility studies;
- Historic audited amounts for each forecast operating budget line item, as well as working capital, reserves and borrowing.

Based on these inputs, the consolidated and integrated SQ forecast provides quantified and selected graphic results on, amongst others:

- Each individual return form line item;
- The accounting and cash operating surplus/deficit;
- Operational and capital project cash flows;
- Movements in the total cash position;
- Various growth percentage analyses;

- Operational cash flow ratios and measurement;
- Liquidity ratios and measurement;
- Borrowing position ratios and measurement;
- Analyses of the operational budget funding position;
- Analyses of the capital budget funding position.

#### **25.1.1.2 Step 2: Critically assess the SQ results and adjust accordingly**

An assessment of the results will enable any identified issues to be addressed through the following adjustable levers:

- Adjusting forecast growth percentages in individual line items;
- Adjusting various working capital/reserves/borrowing policies and strategies;
- Critically analysing and adjusting individual committed projects and prioritisation in terms of capital expenditure, future operating income and expenditure, possible debt funding and grant funding.

The resulting adjusted SQ forecast will then be analysed further in the next step, with a particular view on addressing any remaining funding gaps.

#### **25.1.1.3 Step 3: Test the effects of new debt and planned projects**

To test the effects of any new long-term debt instruments, a further three forecast scenarios can be prepared. Utilising the adjusted SQ forecast (or normal SQ forecast if no adjustments were required), the following three scenarios can be tested:

- Addition of new vanilla debt instruments with no changes to the project list;
- Addition of planned projects (on top of already committed projects) with no changes to the debt profile;
- Addition of both items in 1 and 2 above.

Quantified and selected graphic results are again presented for each of these forecasts, enabling comparison and identification of possible areas requiring further attention.

Further adjustments can be made to test the impact on the total integrated budget of:

- Possible changes to CoT policies and strategies;
- Adjustments to the CoT operating budget;
- Changes to the CoT project list, including reprioritisation, funding, operational impact upon implementation, etc;
- New debt;
- Approval of any planned projects.

#### 25.1.1.4 Step 4: Coordination, consultation and budget compilation

After assessing the integrated budget, the process of coordination and consultation may be conducted, taking into consideration the results of the different planning scenarios.

The aim is to support inter-sectoral municipal coordination as well as consultation with other stakeholders at all levels of government.

The proposed investment and funding strategies for the intergovernmental project pipeline as included in the Capital Planning System and assessed on an integrated level in the Budgeting Simulator®, can be discussed and coordinated with all relevant stakeholders. Further and differing funding possibilities can be investigated and assessed according to steps 2 and 3 above.

Upon completion of the coordination and consultation process, the integrated operating and capital budgets can be compiled and submitted to the approval process.

The table below sets out a summary of the process's alignment with and support to applicable reporting requirements.

Table 40 Reporting Requirements

	Applicable reporting requirement	Alignment
1	mSCOA	Line items are according to official return forms and therefore reconcilable to mSCOA
2	Funding of both operating and capital budgets	Analysis of the funding position of both the integrated operating and capital budgets
3	Credibility of budget, revenue framework, budget assumptions across multi-year planning horizon	Five-year planning horizon which allows for viewing and testing of various assumptions, including interrelationships between budget items. Growth percentages are calculated across the planning horizon
4	Audited annual financial statements used to determine trends	Historic information included and available for trend analysis, compiled from audited annual financial statements
5	Alignment with strategic initiatives	Inclusion of the Capital Planning System prioritised projects and integrating with the operating budget. Further coordination and consultation supported by results

## 25.2 City Improvement District Implementation

A City Improvement District (CID) is a geographic area in which a majority of property or business owners have come together and agreed to provide an extra level of public service through an additional tax or fee on the properties located within that identified space. CIDs are community driven initiatives where the private sector takes the lead in supporting the municipality in the revitalization or maintenance of certain demarcated areas. The additional service that may be provided by the public sector could include street cleaning, security services, engagements with informal traders, business attraction and place marketing amongst others. The establishment of CIDs are acknowledged as one of the key mechanisms to revitalize specific economic nodes within cities.

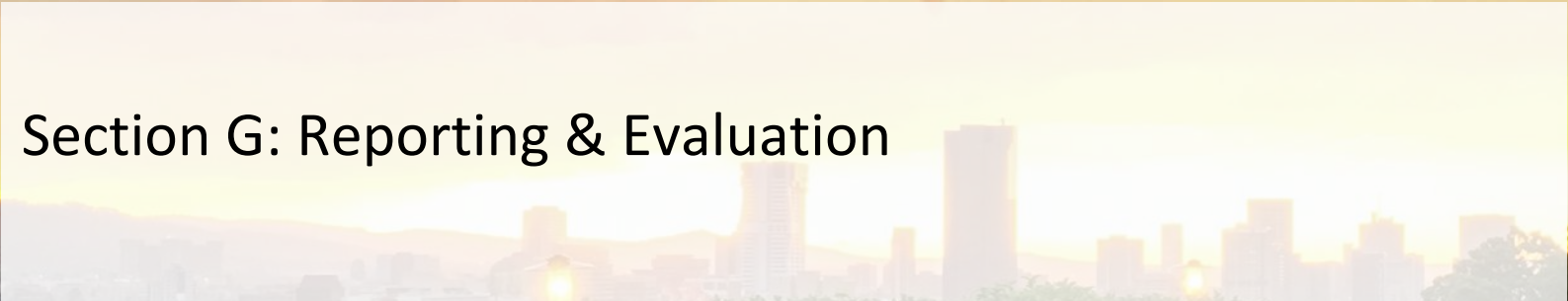
The CID concept originated in 2009 as the result of a report titled "Report Back on Key Findings and Concrete Recommendations on the CID Study for the City of Tshwane". The contents of this report aligned to the Gauteng City Improvement Districts Act, 1997, which was enacted by the province to

facilitate the establishment of CIDs. During 2014 Council approved the development of a Special Ratings Area (SRA) policy in a report titled “Report on the Public Participation Process Conducted on the Draft Special Ratings Areas Policy”. Even though the development of the report was approved, the policy was never empowered with a by-law and omitted key institutional arrangements.

Overall the CID and SRA space has not been established to speak to the city’s needs or administrative functions, which essentially has created legislative uncertainty. Based on this, the city has identified the need to introduce a new by-law which stabilizes functions and governance pertaining to CIDs.

During the preparation of the BEPP document, the by-law report concluded with the public participation process, and as such is still in the process of being drafted for submission to Council for approval.









# Section G: Reporting & Evaluation

## Section G: Reporting and Evaluation

The BEPP performance indicators are a set of criteria which measure the progressive improvements within the urban built environment through the setting of- and reporting against measurable targets. These targets serve to ensure municipal practices strategically align with legislated planning and budgeting requirements for local and other spheres of government, as well as to monitor and evaluate progress (Cities Support Programme, National Treasury). The original list of indicators was designed to monitor and evaluate a set of BEPP performance outcome areas, inclusive of key objectives.

In terms of the City's Theory of Change, reporting encompasses all of the principles identified by the city namely spatial targeting; financial sustainability and collaborative planning, implementation and management. The structure of the outcome's framework concludes with measurable criteria, which measures the impact of actions identified for each vision, based on legislated and standardised layouts required by National Treasury through the Circular No. 88 (C88) reporting process and the MFMA's funding compliance guideline.

Figure 96 Theory of Change

THEORY OF CHANGE - REPORTING			
 PRINCIPLES	 VISION	 POLICY DIRECTIVE	 MEASURABLES
<b>Spatial Transformation</b>	Promote spatial transformation through transit-orientated development, sustainable human settlements and service delivery	<ul style="list-style-type: none"> <li>2019 Review of the MSDF Fundamental Approach (Mission).</li> <li>IDP Strategic Development Pillar 1;2 and 3 (Strategic Intent).</li> </ul>	<ul style="list-style-type: none"> <li>Built Environment Performance Indicators WG8, WG13, CC1, CC2, CC3, IC2, IC2; IC3; IC4; IC5; IC7; IC8; IC9; IC11 and PC4.</li> </ul>
<b>Financial Sustainability</b>	The implementation of an Integrated Long-term Financial Strategy to guide and facilitate the sustainable resourcing of capital investment.	<ul style="list-style-type: none"> <li>Municipal Finance Management Act.</li> <li>SPLUMA. Components for a Spatial Development Framework (CEF).</li> <li>Municipal Standard Chart of Accounts (mSCOA)</li> </ul>	<ul style="list-style-type: none"> <li>Municipal Budget Reporting Regulations.</li> <li>Schedule A1 - Supporting Table SA8 Performance indicators and benchmarks</li> </ul>
<b>Collaborative Planning, Implementation and Management</b>	<ul style="list-style-type: none"> <li>Establish sound inter-governmental and inter-departmental planning practices.</li> <li>Adoption of a workflow procedure which assists in the implementation of projects.</li> <li>Urban Management</li> </ul>	<ul style="list-style-type: none"> <li>Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005).</li> <li>Operation Khawuleza (District Model).</li> <li>IDP Strategic Development Pillar 3 and 5.</li> <li>Gauteng and National SDF</li> <li>Framework for Infrastructure Development Framework.</li> <li>SDBIP - Service delivery and budget implementation plan</li> </ul>	<ul style="list-style-type: none"> <li>Municipal Budget Reporting Regulations.</li> <li>Circular 88 reporting.</li> <li>Annual performance reporting and mid-year review.</li> <li>Capital Expenditure Framework.</li> </ul>

The majority of the built environment performance indicators aligns to the 1st Theory of Change (TOC) principle identified within the City's Theory of Change, namely spatial transformation, and measures the performance of development trends, land-use mix; property value, population distribution and transport accessibility within the City's Integration Zone(s). These indicators form part of the MFMA's C88 indicators issued by National Treasury on the Rationalisation of Planning and Reporting Requirements (November 2017) and based on the Municipal Finance Management Act (No. 56 of 2003).



The 2nd TOC principle strives to achieve financial sustainability. The C88 indicators focus primarily on service provision targets as well as the BEPP focus outlined above but does not specifically speak to theory pertaining to implementing a long-term financial strategy. Instead reference should be made to Schedule A1 - Supporting Table SA8 Performance indicators and benchmarks, which is based on the Municipal Finance Management Act. The SA8 reporting format outlines indicators and benchmarks regarding borrowing management, safety of capital, liquidity, revenue management and creditors management. Although these indicators do not form part of the BEPP requirements for reporting, the SA8 format is required by National Treasury through the submission of annual MTREF. The objective of these indicators directly measures the outcomes of the LTFS and should be used as a guide to indicate the process of achieving and maintaining financial sustainability.

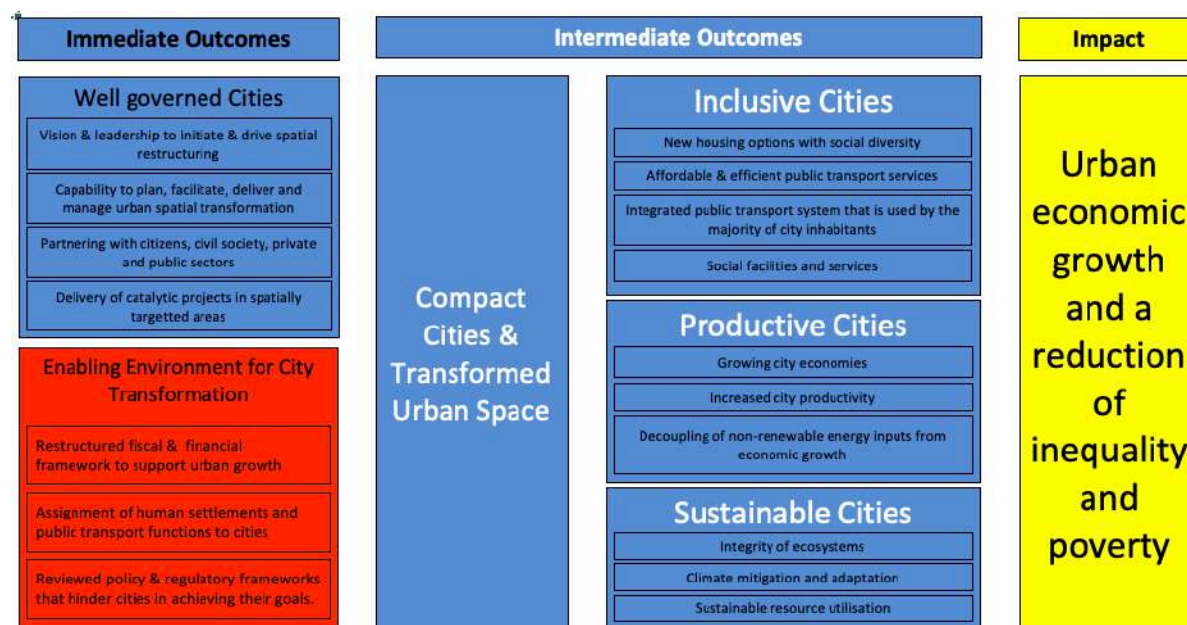
The 3rd TOC principle to achieve collaborative planning, implementation and management indirectly ties with both the C88 indicators and the SA8 reporting format. Establishing sound governance processes will ensure that targets are achieved but will also identify gaps within governance process which should be addresses or strategies which should be implemented to achieve set performance indicators.

The content for Section G has been structured to outline the current methodologies applied to calculate each built environment performance indicator and determines with the way forward with regards to the adoption of C88 reporting by the City.

## 26 Reporting & Evaluation

The BEPP performance indicators, as described by National Treasury, is a set of criteria which measures the progressive improvements within the urban build environment on which measurable targets can be established. These targets serve to ensure practices that strategically align with legislated planning and budgeting requirements for local and other spheres of government, as well as to monitor and evaluate progress (Cities Support Programme, National Treasury). The original list of indicators was designed to monitor and evaluate a set of BEPP performance outcome areas, which include a number of key objectives as displayed in Figure 97.

Figure 97 BEPP Performance Outcome Areas



In comparison to the 2017/18 BEPP requirements, the initial list of 54 outcome indicators were reduced for purposes of the 2018/19 BEPP reporting period. The 2019/20 BEPP guidelines refer to the indicators as set out for 2018/19 with no additional indicators included for the 2019/20 reporting period. Table 41 provides an overview of the BEPP Performance Outcome Areas in relation to the governing body (National/Metro) responsible for reporting performance.

Table 41 BEPP Indicator Reporting Framework

BEPP Outcome area	Number of Indicators – National Reporting Responsibility	Number of Indicators – Municipal Reporting Responsibility
Well governed (WG)	1	3
Compact (CC)		3
Inclusive (IC)	4	7
Productive (PC)		1
Sustainable (SC)		
Total	5	14

As indicated above, the requirements for the 2019/20 BEPP reporting cycle includes the reporting of performance indicators as outlined in the 2018/19 BEPP guidelines. These indicators are listed in Table 42 and includes the BEPP outcome area associated with each indicator, as well as the spatial filter applicable. The category identifies the governing entity responsible for reporting on each indicator, and outlines the content included within this section. Only indicators which should be reported on by the city has been included in Section G.

Table 42 Reporting Outline

Code	BEPP Outcome Area	Indicator	Category	Target or intention	Spatial Filter
WG8	Well governed	The budgeted amount of municipal capital expenditure for catalytic programmes contained in BEPP, as a percentage of the municipal capital budget.	City	Target	BEPP Integration Zone
WG13	Well governed	Percentage change in the value of properties in Integration Zones.	City	Intention	Integration Zones
WG16	Well governed	BEPP Evaluation Score.	National	Target	-
WG17	Well governed	Number of new partnerships entered into to strengthen the intergovernmental project pipeline.	City	Target	-
CC1	Compact	Hectares approved for future development outside the 2015 urban edge as a percentage of Hectares allocated for future development as defined by the 2015 SDF.	City	Target	Urban Edge
CC2	Compact	Number of land use applications processed in integration zones as a percentage of the total number of land use applications submitted city-wide.	City	Intention	Integration Zones
CC3	Compact	Number of building plan applications processed in integration zones as a	City	Intention	Integration Zones

Code	BEPP Outcome Area	Indicator	Category	Target or intention	Spatial Filter
		percentage of the total number of building plan applications city-wide.			
IC1	Inclusive	New subsidised units developed in Brownfields developments as a percentage of all new subsidised units city-wide.	City	Target	Municipal Area
IC2	Inclusive	Gross residential unit density per hectare within integration zones.	City	Target	Integration Zones
IC3	Inclusive	Ratio of housing types in integration zones.	City	Target	Integration Zones
IC4	Inclusive	Ratio of housing tenure status in integration zones.	City	Intention	Integration Zones
IC5	Inclusive	Ratio of land use types (residential, commercial, retail, industrial) in integration zones.	City	Target	Integration Zones
IC6	Inclusive	%households accessing subsidy units in integration zones that come from informal settlements.	City	Target	Integration Zones
IC7	Inclusive	Number of all dwelling units within Integration Zones that are within 800 metres of access points to the integrated public transport system as a percentage of all dwelling units within Integration Zones.	City	Intention	Integration Zones
IC8	Inclusive	Percentage share of household income spent on transport costs for different household income quintiles city-wide.	National	Intention	-
IC9	Inclusive	Capital expenditure on integrated public transport networks as a percentage of the municipal capital expenditure.	National	Target	-
IC11a	Inclusive	% learners travelling for longer than 30 minutes to an education institution.	National	Intention	-
IC11b	Inclusive	% of workers travelling for longer than 30 minutes to their place of work.	National	Intention	-
PC4	Productive	Commercial and industrial rateable value within integration zone for a single metro as a % of overall commercial and industrial rateable value for that same metro.	City	Intention	Integration Zones

## 26.1 BEPP Performance Indicators Methodology

The following section is structured according to the BEPP outcome areas as listed in Table 41 and includes an overview of the calculation methodology applied to each indicator. The contents of Table 43 – Table 56 is structured according to the following categories, which outlines the process followed in terms of calculating each indicator.

- **Target:** Includes the factors or data requirements associated with each indicator.
- **Source data:** Includes the information sourced for purposes of calculating each indicator.

- **Data integrity and comments:** Includes a summarised data audit of the datasets collected as well as limitation factors which impacted the calculation or result of each indicator.
- **Assumptions:** Indicates assumptions made with regards to the calculation methodology or source data, in order to conform to the criteria as set out by National Treasury.
- **Methodology:** Outlines an overview of the methodology applied with regards to the calculation of each indicator.
- **Results:** Includes the calculated target and a short evaluation of the results. A summarised table of the calculated targets and results are listed in Annexure 4.
- **Proposed methodology and data improvements:** Includes the proposed way forward in terms of calculating performance indicators for future reference. For indicators which could not be calculated, a proposed methodology has been included for implementation once outstanding or adequate datasets become available.

### 26.1.1 Well Governed Cities

The following BEPP performance indicators are focussed towards achieving well governed cities and aims to evaluate and track the following key objectives (refer to Figure 97):

- Vision and leadership to initiate and drive spatial restructuring;
- Capability to plan, facilitate, deliver and manage urban spatial transformation;
- Partnering with citizens, civil society, private and public sectors, and;
- Delivery of catalytic projects in spatially targeted areas.

Table 43 - Table 45 outlines performance indicators which specifically align to the above-mentioned objectives and outcomes, together with the categories as outlined in Chapter 26.1.

Table 43 BEPP Indicator Number WG8

Category	Description
Indicator Description	The budgeted amount of municipal capital expenditure for catalytic programmes contained in the BEPP, as a percentage of the municipal capital budget (WG8).
Target	To calculate the percentage of capital expenditure allocated to catalytic projects in relation to the municipality's total capital expenditure. The outcome provides an indication of whether the municipality is emphasizing catalytic projects, in percentage rand value.
Source Data	The source data includes the following: <ul style="list-style-type: none"> <li>▪ Catalytic Projects as delineated in Section C and Annexures 1, 2 and 3.</li> <li>▪ BEPP Integration Zones as delineated in Section B.</li> <li>▪ Capital budget based on the latest MTREF Annexure A.</li> </ul>
Data Integrity and Comments	The capital expenditure which originates from the City's Capital Planning and Prioritisation System (CaPS). The identification of Catalytic Land Development Programmes (CLDP) has been described in Section C and includes projects as outlined in Annexures 1,2 and 3. The City has defined CLDP's as programmes located within BEPP Integration Zone, which has been allocated capital budget for the MTREF.
Methodology	The CaPS System allows for the filtering of projects located within BEPP Integration Zone, through the use of spatial intersection calculations. Projects captured onto

Category	Description										
	<p>CaPS contain spatial locations, enabling the use of spatial functions to identify a portfolio of projects. CLDPs stems from the identification of a portfolio of projects located within BEPP Integration Zones. In order to express the target as a percentage of rand value, the capital expenditure for CLDPs (refer to Section C) was compared to the total capital expenditure of the city.</p> <p><i>(Capital expenditure for catalytic projects) / (Total municipal capital budget) x100</i></p>										
Results	<p>The calculation of the performance indicator resulted in capital budget allocated to CLDPs as a percentage rand value of the city’s total capital budget. The results indicated that the city is investing more or less 20% of its capital budget within spatially targeted areas.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td>27%</td><td>24%</td><td>23%</td><td>24%</td><td>19%</td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target	27%	24%	23%	24%	19%
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
27%	24%	23%	24%	19%							
Proposed Methodology and Data Improvements	<p>Due to the nature and timelines of the budgeting cycle within the city, this indicator could not be calculated in an accurate manner and was based on the draft capital budget as received by Group Financial Services. Once the final and approved version of the capital budget (Annexure A) becomes available, WG8 will be updated accordingly.</p>										

Table 44 BEPP Indicator Number WG13

Category	Description
Indicator Description	Percentage change in the value of properties in Integration Zones (WG13).
Target	The outcome aims to establish a trend in economic activity as well as private sector participation, by indicating either an increase or decrease in property value. The target should be expressed in percentage rand value.
Source Data	<p>The source data includes the following and has been sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS):</p> <ul style="list-style-type: none"> <li>Valuation Role for 2018.</li> <li>Cadastral Information which links with the valuation role information for 2018.</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	The 2018/19 BEPP document did not include the WG13 indicator, due to unavailability of data. Although data has been collected successfully for purposes of the 2019/20 BEPP document, the valuation role only indicates the value of properties for the 2018 year. Based on the availability of data, the WG13 indicator will be calculated for the 2018 year only and will not include the establishment of trendline data ranging from 2016/17 – 2020/21.
Methodology	To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order to identify properties located within the integration zone. The valuation role for 2018 was spatially joined to the cadastral information which allowed for spatial

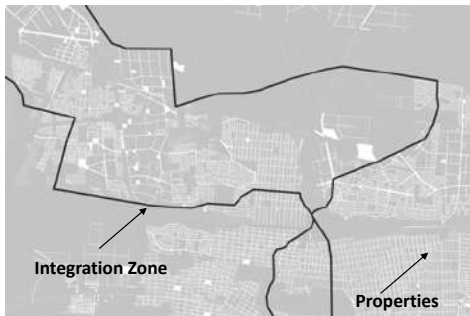
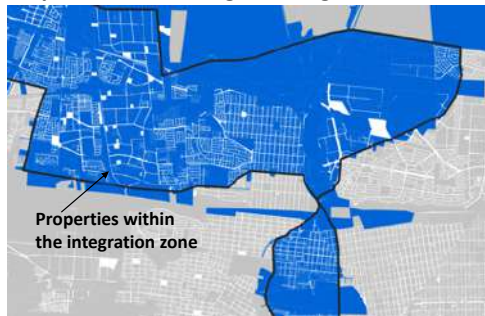
Category	Description										
	<p>calculations pertaining to the relation between property values and the integration zone.</p> <div><div><p><b>Original Source Data</b></p></div><div><p><b>Properties Intersecting the integration zone</b></p></div></div> <p>To achieve a result which indicates the percentage of property value within the integration zone for 2018/19, the total property value within the integration zone was divided by the total property value city wide in order to achieve a percentage rand value.</p> <p><i>(Total property value within the integration zone) / (Total property value city wide) x100</i></p>										
Results	<p>The results of the indicator could not be interpreted for purposes of the 2019/20 BEPP submission, due to the limitation factor mentioned above. The valuation role only indicates property values for 18/19 and cannot be used to establish an increase or decrease in property values.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td></td><td></td><td>14%</td><td></td><td></td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target			14%		
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
		14%									
Proposed Methodology and Data Improvements	<p>Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on information available for year 3 (2018/19). To calculate a more accurate indicator, which conforms to the requirements as set out in the 2018/19 BEPP Guideline, value of properties is required for year 1 (2016/17) and year 3 (2018/19).</p>										

Table 45 BEPP Indicator Number WG17

Category	Description
Indicator Description	Number of new partnerships entered into to strengthen the intergovernmental project pipeline (WG17).
Target	The outcome aims to establish a collaborative capital planning environment between the city and National/Provincial departments. The objective includes streamlining development, reducing wasteful expenditure and collectively focussing on areas with the highest potential of investment and sustainable development. The following public entities have been identified as target groups:



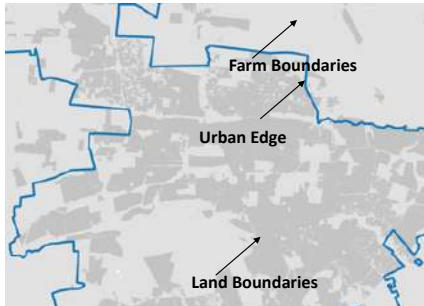
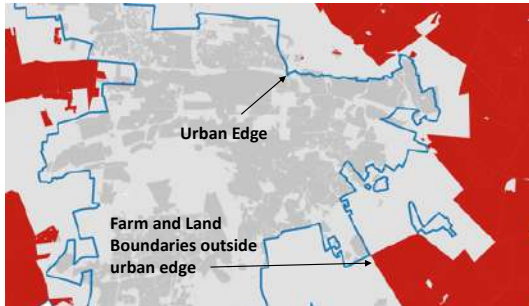
Category	Description													
	<b>National Government</b>	<b>Gauteng Provincial Government</b>	<b>State Owned Entities</b>	<b>Public Private</b>										
	National Department of Education National Department of Health National Department of Human Settlements National Department of Energy National Department of Social Development National Department of Economic Development National Department of Public Works National Department of Rural Development and Land Reform National Department of Sports and Recreation National Department of Water and Sanitation	Infrastructure Development Health Human Settlements Sports and recreation	Airports Company of South Africa Limited (ACSA) Broadband Infrastructure Company (Pty) Ltd Development Bank of Southern Africa ESKOM Land and Agricultural Development Bank of South Africa South African Express (Pty) Limited Transnet Limited	Gautrain										
	The outcome of this indicator will provide an indication of whether the municipality is emphasizing intergovernmental project pipeline planning in collaboration with National Government, Gauteng Provincial Government, State Owned Entities or Public entities.													
Source Data	The source data is based on information received from Gauteng Provincial Government for the 2019/20 financial year.													
Data Integrity and Comments	The 2018/19 BEPP document included data from PRASA, Gauteng Provincial Government and the National Department of Public Works. For purposes of the 2019/20 BEPP submission, information from Gauteng Provincial Government was sourced.													
Methodology and Results	The city forms part of a Tri-Metro Forum which was established in 2018. This platform enables public entities and neighbouring municipalities to collaboratively plan and share valuable information with regards to capital investment priorities. Information has been sourced from this forum and includes the data shared by Gauteng Provincial Government.  Targets: <table> <tr> <td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr> <tr> <td></td><td></td><td>3</td><td>1</td><td></td></tr> </table>				16/17 data	17/18 target	18/19 target	19/20 target	20/21 target			3	1	
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target										
		3	1											

### 26.1.2 Compact Cities and Transformed Urban Space

The following BEPP performance indicators evaluate and track objectives which aim to achieve compact cities and transformed urban space. Table 46 - Table 48 outlines the performance indicators which specifically aims to achieve the above-mentioned objective, together with the categories as outlined in Chapter 26.1.

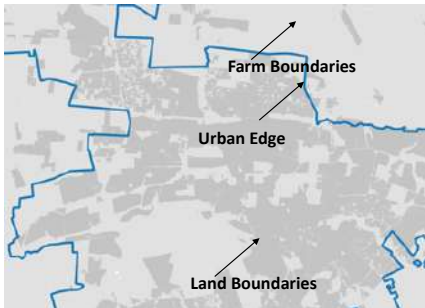
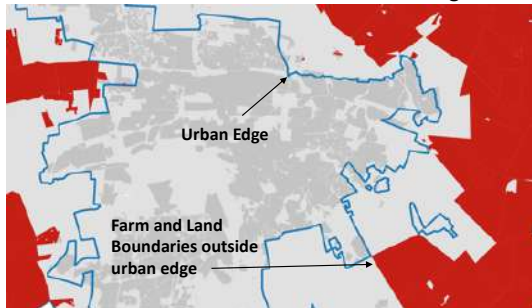
Table 46 BEPP Indicator Number CC1

Category	Description
Indicator Description	Hectares approved for future development outside the 2015 urban edge as a percentage of Hectares allocated for future development as defined by the 2015 SDF (CC1).
Target	To calculate the percentage of approved future development outside the urban edge in relation to all allocated future developments.

Category	Description										
	The outcome indicates whether authorities within the municipality are adhering to long term plans for the city, together with the urban sprawl that the city is undergoing. The target should be calculated and expressed as a percentage hectare value.										
Source Data	<p>The source data includes the following and has been sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS) and the Application Processing System (APS):</p> <ul style="list-style-type: none"><li>▪ Application data as captured onto the APS, ranging from 2001 – 2018;</li><li>▪ Cadastral Information which links with information extracted from APS, and;</li><li>▪ The outline of the 2015 urban edge.</li></ul>										
Data Integrity and Comments	The 2018/19 BEPP did include the CC1 indicator based on information sourced from the “Build and under construction” and “Trends and Applications” trends analysis. For purposes of the 2019/20 BEPP submission, the indicator was recalculated based on new information sourced from APS and Corporate GIS. The records within the APS database could not be linked to erven boundaries due to inconsistencies within the data captured. Information has been linked to farm and land boundaries which contain less detail due to scale. Interpretation of the result should take cognisance of the above-mentioned data limitations.										
Methodology	<p>To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order to identify farm and land boundaries located outside the urban edge. The APS data ranging from 2001 - 2018 was spatially joined to the farm and land boundaries which allowed for spatial calculations pertaining to the relation between hectares approved for future development and the urban edge.</p> <div><div><p>Original Source Data</p></div><div><p>Farm and Land Boundaries outside urban edge</p></div></div> <p>To achieve a result which indicates the percentage of hectares approved for development outside the urban edge, the farm and land area (hectares) approved for future development outside the urban edge was divided by the total farm and land area (hectares) allocated for future development city wide.</p> <p><i>(Hectares approved for future development outside the urban edge) / (Hectares approved for future development city wide) x100</i></p>										
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>Results for the 2019/20 target amounts to 12% of hectares approved for future development outside the urban edge, which indicates that the city is improving in terms of adhering to long term plans and the management of urban sprawl.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td>34%</td><td>17%</td><td>17%</td><td>12%</td><td></td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target	34%	17%	17%	12%	
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
34%	17%	17%	12%								

Category	Description
Proposed Methodology and Data Improvements	Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on information which misrepresents hectares approved for future development. To calculate a more accurate indicator, which conforms to the requirements as set out in the 2018/19 BEPP Guideline, the APS data should be captured accurately in terms of spatial location.

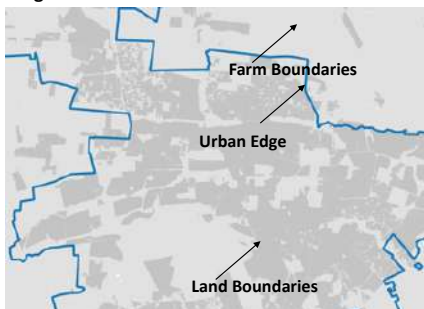
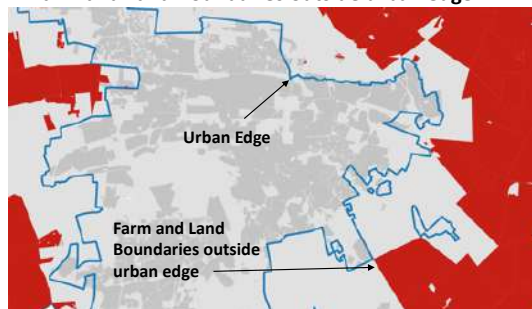
Table 47 BEPP Indicator Number CC2

Category	Description
Indicator Description	Number of land use applications processed in integration zones as a percentage of the total number of land use applications submitted city-wide (CC1).
Target	<p>To calculate the number of land use applications processed within the integration zone in relation to the total number of land use applications city-wide.</p> <p>The outcome indicates whether there is private sector investment interest within the integration zone. The target should be calculated and expressed as a percentage of number of applications.</p>
Source Data	<p>The source data includes the following and has been sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS) and the Application Processing System (APS):</p> <ul style="list-style-type: none"> <li>Application data as captured onto the APS, ranging from 2001 – 2018.</li> <li>Cadastral Information which links with information extracted from APS.</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	The 2018/19 BEPP did include the CC2 indicator based on information sourced from the “Trends and Applications” trends analysis. For purposes of the 2019/20 BEPP submission, the indicator was recalculated based on new information sourced from APS and Corporate GIS. The records within the APS database could not be linked to erven boundaries due to inconsistencies within the data captured. Information has been linked to farm and land boundaries which contain less detail due to scale. Interpretation of the result should take cognisance of the above-mentioned data limitations.
Methodology	<p>To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order identify farm and land boundaries within the integration zone. The APS data ranging from 2001 - 2018 was spatially joined to the farm and land boundaries which allowed for spatial calculations pertaining to the relation between number of land use applications processed and the integration zone.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>Original Source Data</b></p>  </div> <div style="text-align: center;"> <p><b>Farm and Land Boundaries outside urban edge</b></p>  </div> </div> <p>To achieve a result which indicates the percentage of land use applications processed within the integration zone, the number of land use applications processed (farm and land boundaries) within the integration zone was divided by the total number of land use applications processed city wide.</p>

Category	Description										
	<i>(Number of land use applications processed within the integration zone) / (Number of land use applications processed city wide) x100</i>										
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>Results for the 2019/20 target amounts to 47% of land use applications processed within the integration zone, which indicates that there is considerable interest from the private sector to invest within the integration zone.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td>45%</td><td>51%</td><td>47%</td><td>47%</td><td></td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target	45%	51%	47%	47%	
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
45%	51%	47%	47%								
Proposed Methodology and Data Improvements	Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on information which misrepresents the location of land use applications processed. To calculate a more accurate indicator, which conforms to the requirements as set out in the 2018/19 BEPP Guideline, the APS data should be captured accurately in terms of spatial location and erven boundaries.										

Table 48 BEPP Indicator Number CC3

Category	Description
Indicator Description	Number of building plan applications processed in integration zones as a percentage of the total number of building plan applications city-wide (CC3).
Target	<p>To calculate the number of building plan applications processed within the integration zone, in relation to the total number of building plan applications city-wide.</p> <p>The outcome indicates the appetite for economic activity within a particular area. If building plan applications occur within the integration zone, it indicates that there is development interest from the private sector. The target should be calculated and expressed as a percentage of number of building plan applications.</p>
Source Data	<p>The source data includes the following and has been sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS) and Building Plans and Inspections Management:</p> <ul style="list-style-type: none"> <li>Building Plan Application information, ranging from February 2018 – February 2019.</li> <li>Cadastral Information.</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	The 2018/19 BEPP did not include the CC3 indicator, due to unavailability of data. Data was sourced for purposes of the 2019/20 BEPP submission which included building plan applications processed. The building plan information could not be linked to erven boundaries due to inconsistencies within the data captured. Information has been linked to farm and land boundaries which contain less detail due to scale. Interpretation of the result should take cognisance of the above-mentioned data limitations.
Methodology	To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order identify farm and land boundaries within the integration zone. The building plan information was spatially joined to the farm and land boundaries which allowed for spatial calculations pertaining to the relation between number of building plan applications processed and the integration zone.

Category	Description										
	<div><div><p><b>Original Source Data</b></p></div><div><p><b>Farm and Land Boundaries outside urban edge</b></p></div></div> <p>To achieve a result which indicates the percentage of building plan applications processed within the integration zone, the number of building plan applications processed (farm and land boundaries) within the integration zone was divided by the total number of building plan applications processed city wide.</p> <p><i>(Number of building plan applications processed within the integration zone) / (Number of building plan applications processed city wide) x100</i></p>										
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>Results for the 2018/19 target amounts to 39% of building plan applications processed within the integration zone, which indicates that there is considerable interest from the private sector to invest within the integration zone.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td></td><td></td><td>39%</td><td></td><td></td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target			39%		
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
		39%									
Proposed Methodology and Data Improvements	<p>Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on information which misrepresents the location of building plan applications processed. To calculate a more accurate indicator, which conforms to the requirements as set out in the 2018/19 BEPP Guideline, the APS data should be captured accurately in terms of spatial location and erven boundaries.</p>										

### 26.1.3 Inclusive Cities

The following BEPP Performance indicators are focussed towards achieving inclusive cities and aims to evaluate and track the following key objectives:

- New housing options with social diversity;
- Affordable and efficient public transport services;
- Integrated public transport system that is used by the majority of city inhabitants, and;
- Social facilities and services located within integration zones.

Table 49 - Table 55 outlines the performance indicators which specifically align to the above-mentioned objectives and outcomes, together with the categories as outlined in Chapter 26.1.



Table 49 BEPP Indicator Number IC1

Category	Description
Indicator Description	New subsidised units developed in Brownfields developments as a percentage of all new subsidised units city-wide (IC1).
Target	To calculate the number of new subsidized units developed within Brownfields developments as a percentage of all new subsidized units. Brownfields developments are usually associated with urban infill and in-situ upgrading of informal settlements which is preferential to further urban expansion and sprawl. The target should be expressed as a percentage of subsidised units.
Source Data	The following spatial information is required: <ul style="list-style-type: none"> <li>▪ Number of new subsidised housing units in brownfields development (Department of Human Settlements);</li> <li>▪ Total number of newly provided subsidised housing units city-wide (Department of Human Settlements), and;</li> <li>▪ Location of Brownfields development areas.</li> <li>▪ Critical input data was not made available for purposes of the 2019/20 BEPP document. The calculation of this indicator will be finalised once the required datasets become available.</li> </ul>
Proposed Methodology and Data Improvements	Once the information becomes available, the indicator will be updated according to the following proposed calculation process: <ul style="list-style-type: none"> <li>▪ Spatial calculation which determines the relation between new subsidised housing units within brownfields development areas and city-wide new subsidised housing units, and;</li> <li>▪ <math>(\text{Number of new subsidised housing units in brownfields development}) / (\text{Total number of newly provided subsidised housing units city-wide}) \times 100</math>.</li> <li>▪ The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information from the Department of Human Settlements.</li> </ul>

Table 50 BEPP Indicator Number IC2

Category	Description
Indicator Description	Gross residential unit density per hectare within integration zones (IC2).
Target	To calculate the ratio between the number of households within the integration zone and the area of the integration zone in hectares. The calculation of residential density within the integration zone is good measure of services utilized (public transport) as well as spatial transformation through densification. The target should be expressed as a ratio in its simplest form.
Source Data	The following spatial information is required: <ul style="list-style-type: none"> <li>▪ Number of households expressed spatially;</li> <li>▪ Total coverage area of the integration zone, and;</li> <li>▪ BEPP Integration Zones as delineated in Section B.</li> </ul> Critical input data was not made available for purposes of the 2019/20 BEPP document. The calculation of this indicator will be finalised once the required datasets become available.
Proposed Methodology and Data Improvements	Once the information becomes available, the indicator will be updated according to the following proposed calculation process: <ul style="list-style-type: none"> <li>▪ Spatial calculation which determines the relation between household density and the integration zone in hectares (Section B), in order to establish gross residential unit density within the integration zone.</li> </ul>



Category	Description
	(Number of households in integration zones) : (Area of integration zones (hectares)) The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information.

Table 51 BEPP Indicator Number IC3

Category	Description
Indicator Description	Ratio of housing types in integration zones (IC3).
Target	To calculate the ratio of different housing types within the integration zone. The outcome measures and provides an understanding of the mix and type of households vested within the integration zone. The target should be calculated and expressed as a ratio.
Source Data	The source data includes the following and has been sourced from STATSSA: <ul style="list-style-type: none"> <li>Geography by type of main dwelling, as recorded by STATSSA during the 2011 Census (per ward level);</li> <li>Municipal Ward Boundaries which aligns spatial location with STATSSA datasets, and;</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	The above-mentioned datasets were sourced from open-source platforms and has been recorded for year 2011. The STATSSA datasets does not conform to the data elements required for the target calculation as set out in the BEPP Indicator toolkit, but provides an indication in terms of housing typologies. Based on the availability of data, the IC3 target will include the 2011 data as proxy for 2016/17 and will not include the establishment of trendline data ranging from 2016/17 – 2020/21.
Assumptions	The categorization of dwelling types as recorded by STATSSA has been grouped into the following housing types, in order to conform to the data element requirements as outlined within the BEPP Indicator toolkit: <ul style="list-style-type: none"> <li>Formal dwellings consist of the following STATSSA classifications: <ul style="list-style-type: none"> <li>House or brick/concrete block structure on a separate stand or yard or on a farm;</li> <li>Flat or apartment in a block of flats;</li> <li>Cluster house in complex;</li> <li>Townhouse (semi-detached house in a complex);</li> <li>Semi-detached house;</li> <li>House/flat/room in backyard, and;</li> <li>Room/flatlet on a property or larger dwelling/servants' quarters/granny flat.</li> </ul> </li> <li>Traditional dwellings consist of the following STATSSA classifications: <ul style="list-style-type: none"> <li>Traditional dwelling/hut/structure made of traditional materials.</li> </ul> </li> <li>Other households consist of the following STATSSA classifications: <ul style="list-style-type: none"> <li>Caravan/tent, and;</li> <li>Other.</li> </ul> </li> </ul> <p>An equal distribution assumption has been adopted regarding the location of dwelling units. <i>If a ward has 500 dwelling units its assumed to be distributed equally across the ward extent, as delineated by the ward boundary.</i></p>
Methodology	To calculate the above-mentioned indicator, spatial intersect queries and calculations were required to establish a percentage distribution regarding housing typologies within the integration zone. The percentage distribution was calculated based on the total ward area within the integration zone divided by the total ward area located along the integration zone boundary.

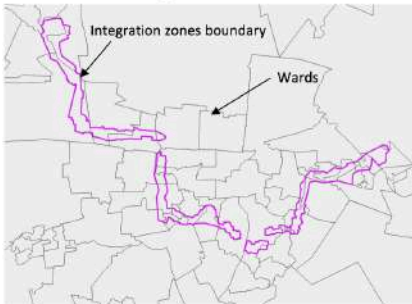
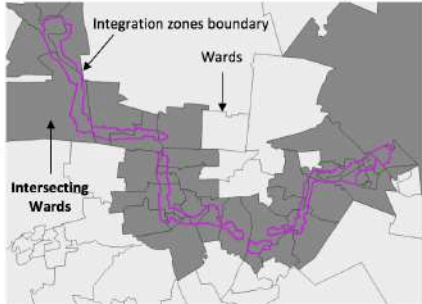
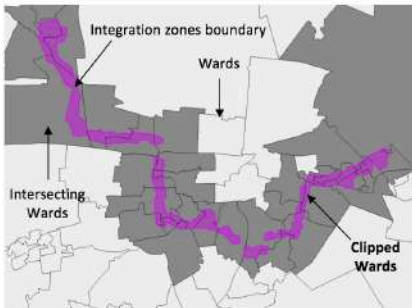

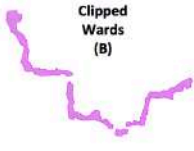
Category	Description																									
	<div><div><div><p>Original Source Data</p></div><div><p>Wards intersecting integration zones</p></div></div><div><p>STEP 1</p></div><div><div><p>Wards clipped by the integration zones</p></div><div><p>Intersecting Wards (A)</p></div><div><p>Clipped Wards (B)</p></div></div><div><p>STEP 2</p></div><div><p>STEP 3</p></div><div><p>% Distribution (per ward id) = Area (B) / Area (A)</p></div></div> <p>To achieve a target expressed as a ratio, the percentage distribution calculated above was applied to the total of each dwelling type (Formal dwellings: Traditional dwellings: Other households) located within wards intersecting the integration zone. The above was then divided by the grand total to obtain a percentage value of the number of dwelling types within the integration zone.</p>																									
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>The results indicate that the majority of dwelling types within the integration zone includes formal dwellings.</p> <table><tr><td>Total Formal dwelling (Data element 1)</td><td>/ Grand Total (Data element 4)</td><td>x 100</td><td>88,04705799</td><td>88</td></tr><tr><td>Total Informal dwelling (Data element 2)</td><td>/ Grand Total (Data element 4)</td><td>x 100</td><td>10,96722916</td><td>11</td></tr><tr><td>Total Other (Data element 3)</td><td>/ Grand Total (Data element 4)</td><td>x 100</td><td>0,556625463</td><td>1</td></tr></table> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td>88:11:01</td><td></td><td></td><td></td><td></td></tr></table>	Total Formal dwelling (Data element 1)	/ Grand Total (Data element 4)	x 100	88,04705799	88	Total Informal dwelling (Data element 2)	/ Grand Total (Data element 4)	x 100	10,96722916	11	Total Other (Data element 3)	/ Grand Total (Data element 4)	x 100	0,556625463	1	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target	88:11:01				
Total Formal dwelling (Data element 1)	/ Grand Total (Data element 4)	x 100	88,04705799	88																						
Total Informal dwelling (Data element 2)	/ Grand Total (Data element 4)	x 100	10,96722916	11																						
Total Other (Data element 3)	/ Grand Total (Data element 4)	x 100	0,556625463	1																						
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target																						
88:11:01																										
Proposed Methodology and Data Improvements	<p>Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on a number of assumptions. The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information from the Department of Human Settlements.</p>																									

Table 52 BEPP Indicator Number IC4

Category	Description
Indicator Description	Ratio of housing tenure status in integration zones (IC4).

Category	Description
Target	<p>To calculate the ratio between the different types of housing tenure status within the integration zone.</p> <p>The outcome measures and provides an understanding of the different housing types vested within the integration zone, which are intended to have a mixed range of housing typologies. The target should be calculated and expressed as a ratio.</p>
Source Data	<p>The source data includes the following and has been sourced from STATSSA:</p> <ul style="list-style-type: none"> <li>▪ Geography by housing tenure status, as recorded by STATSSA during the 2011 Census (per ward level);</li> <li>▪ Municipal Ward Boundaries which aligns spatial location with STATSSA datasets, and;</li> <li>▪ BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	<p>The above-mentioned datasets were sourced from open-source platforms and has been recorded for year 2011. The STATSSA datasets does not conform to the data elements required for the target calculation as set out in the BEPP Indicator toolkit, but provides an indication in terms of housing tenure status. Based on the availability of data, the IC4 target will include the 2011 data as proxy for 2016/17 and will not include the establishment of trendline data ranging from 2016/17 – 2020/21.</p>
Assumptions	<p>The categorization of housing tenure status as recorded by STATSSA has been grouped into the following types, in order to conform to the data element requirements as outlined within the BEPP Indicator toolkit:</p> <ul style="list-style-type: none"> <li>▪ Rented:</li> <li>▪ Rented.</li> <li>▪ Partially owned:</li> <li>▪ Owned but not yet paid off.</li> <li>▪ Fully owned:</li> <li>▪ Owned and fully paid off.</li> <li>▪ Other:</li> <li>▪ Occupied rent-free, and;</li> <li>▪ Other.</li> </ul> <p>An equal distribution assumption has been adopted regarding the location of housing tenure status types (units). <i>If a ward has 500 units its assumed to be distributed equally across the ward extent, as delineated by the ward boundary.</i></p>
Methodology	<p>To calculate the above-mentioned indicator, spatial intersect queries and calculations were required to establish a percentage distribution regarding housing tenure status types within the integration zone. The percentage distribution was calculated based on the total ward area within the integration zone divided by the total ward area located along the integration zone boundary.</p>

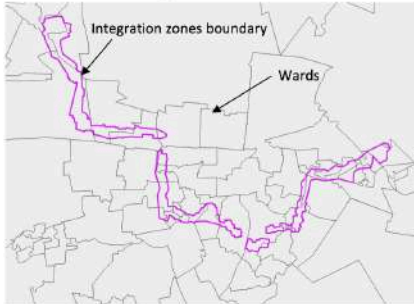
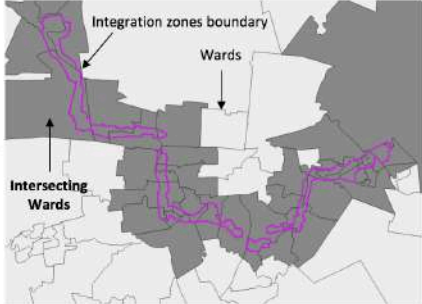
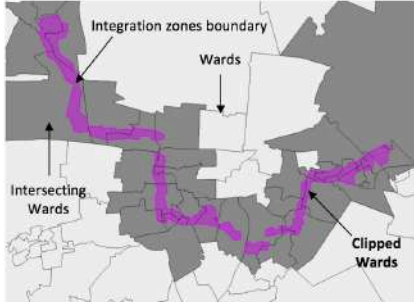


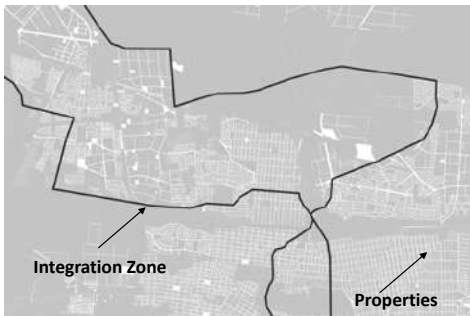
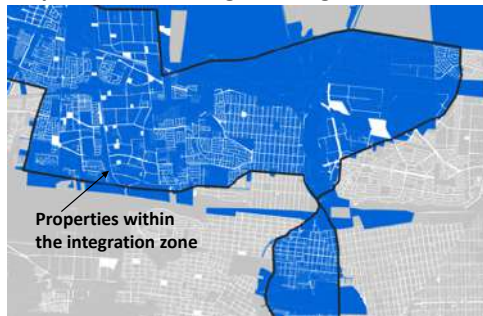
Category	Description																														
	<div><div><div><p>Original Source Data</p></div><div><p>Wards intersecting integration zones</p></div></div><p>STEP 1</p><div><div><p>Wards clipped by the integration zones</p></div><div><p>Intersecting Wards (A)</p></div><div><p>Clipped Wards (B)</p></div></div><p>STEP 2</p><p>STEP 3</p><p>% Distribution (per ward id) = Area (B) / Area (A)</p></div> <p>To achieve a target expressed as a ratio, the percentage distribution calculated above was applied to the total of each tenure status type (Rented: Partially owned: Fully owned: Other) located within wards intersecting the integration zone. The above was then divided by the grand total to obtain a percentage value of the tenure status types within the integration zone.</p>																														
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>The results indicate that the majority of tenure status types within the integration zone includes rented properties.</p> <table><tr><td>Total Rented (Data element 1)</td><td>/ Grand Total (Data element 5)</td><td>x 100</td><td>85,04705799</td><td>85</td></tr><tr><td>Total Partially Owned (Data element 2)</td><td>/ Grand Total (Data element 5)</td><td>x 100</td><td>8,96722916</td><td>9</td></tr><tr><td>Total Fully Owned (Data element 3)</td><td>/ Grand Total (Data element 5)</td><td>x 100</td><td>2,000625463</td><td>2</td></tr><tr><td>Total Other (Data element 4)</td><td>/ Grand Total (Data element 5)</td><td>x 100</td><td>3,568684369</td><td>4</td></tr></table> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td>49:15:24:12</td><td></td><td></td><td></td><td></td></tr></table>	Total Rented (Data element 1)	/ Grand Total (Data element 5)	x 100	85,04705799	85	Total Partially Owned (Data element 2)	/ Grand Total (Data element 5)	x 100	8,96722916	9	Total Fully Owned (Data element 3)	/ Grand Total (Data element 5)	x 100	2,000625463	2	Total Other (Data element 4)	/ Grand Total (Data element 5)	x 100	3,568684369	4	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target	49:15:24:12				
Total Rented (Data element 1)	/ Grand Total (Data element 5)	x 100	85,04705799	85																											
Total Partially Owned (Data element 2)	/ Grand Total (Data element 5)	x 100	8,96722916	9																											
Total Fully Owned (Data element 3)	/ Grand Total (Data element 5)	x 100	2,000625463	2																											
Total Other (Data element 4)	/ Grand Total (Data element 5)	x 100	3,568684369	4																											
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target																											
49:15:24:12																															
Proposed Methodology and Data Improvements	<p>Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on a number of assumptions. The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information from the Department of Human Settlements.</p>																														

Table 53 BEPP Indicator Number IC5

Category	Description
Indicator Description	Ratio of land use types (residential, commercial, retail, industrial) in integration zones (IC5).

Category	Description										
Target	The outcome provides an indication of the relative land use mix present within the integration zone. Once the relationship between commercial, residential, retail and industrial is known, the target should be calculated and expressed as a ratio.										
Source Data	<p>The source data includes the following which was sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS):</p> <ul style="list-style-type: none"><li>Valuation Role for 2018 which includes land use types;</li><li>Cadastral Information which links with the valuation role information for 2018, and;</li><li>BEPP Integration Zones as delineated in Section B.</li></ul>										
Data Integrity and Comments	<p>The 2018/19 BEPP document did not include the IC5 indicator, due to unavailability of data. Although some of the data elements were collected for purposes of the 2019/20 BEPP document, additional data elements remain outstanding which includes gross lettable area (GLA) and number of households. Based on the availability of data, the IC5 indicator will be calculated for the 2018/19 year only.</p>										
Methodology	<p>To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order to identify properties located within the integration zone. The land use information contained within the valuation role for 2018 was spatially joined to the cadastral information which allowed for the spatial calculations pertaining to the relation between different land use types and the integration zone.</p> <div><div><p>Original Source Data</p><p>Integration Zone</p><p>Properties</p></div><div><p>Properties Intersecting the integration zone</p><p>Properties within the integration zone</p></div></div> <p>To achieve a result which indicates the ratio between land use types within the integration zone for 2018/19, the land use mix was presented as a ratio between residential, commercial, retail, industrial.</p> <p>(% Commercial: % Industrial: % Residential)</p>										
Results	<p>Interpretation of the results should take cognisance of the above-mentioned limitation factor.</p> <p>The above-mentioned methodology resulted in the following ratio: 19% Commercial : 15% Industrial : 67% Residential</p> <p>The ratio indicates that the largest proportion of land use within the integration zone amounts to 67% for residential use. This ratio does not necessarily present true mixed-use developments. Aspects which should also be considered includes transport modes, population density, building density and access indices.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table> <p>19:15:67</p>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target					
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							

Category	Description
Proposed Methodology and Data Improvements	Due to the nature of the source data and the limitation factors mentioned above, this indicator could not be calculated in an accurate manner and was based on information available in terms of land use type. In order to accurately identify the ratio of land use types within the integration zone, household density and GLA should be considered. Once this information becomes available, the indicator will be updated to align to the requirements as set out in the 2018/19 BEPP guideline.

Table 54 BEPP Indicator Number IC6

Category	Description
Indicator Description	% households accessing subsidy units in integration zones that come from informal settlements (IC6).
Target	To calculate the percentage of households that have access to subsidised housing units within the integration zone. The target measures the extent to which people from informal settlements are being catered for in terms of subsidised housing opportunities created within the integration zone. The target should be expressed as a percentage of households.
Source Data	The following spatial information is required: <ul style="list-style-type: none"> <li>Number of subsidy units provided in integration zones (Department of Human Settlements);</li> <li>Number of households from informal settlements accessing subsidy units within the integration zone, and;</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Proposed Methodology and Data Improvements	Once the information becomes available, the indicator will be updated according to the following proposed calculation process: <ul style="list-style-type: none"> <li>Spatial calculation which determines the relation between number of households from informal settlements accessing subsidy units within the integration zone and the number of subsidy units provided within the integration zone.</li> <li><math>(\text{Number of households from informal settlements accessing subsidy units in the integration zone}) / (\text{Number of subsidy units provided in the integration zone}) \times 100</math>.</li> <li>The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information from the Department of Human Settlements.</li> </ul>

Table 55 BEPP Indicator Number IC7

Category	Description
Indicator Description	Number of all dwelling units within integration zones that are within 800 metres of access points to the integrated public transport system as a percentage of all dwelling units within integration zones (IC7).
Target	To calculate the number of dwellings that have access to an integrated public transport network, within an 800m radius. Access to a public transport system is an important component of an effective public transport system. 800m is generally accepted as the walkshed around a public transport node. The target should be calculated and expressed as a percentage value.
Source Data	The following spatial information is required: <ul style="list-style-type: none"> <li>The spatial distribution and density of dwelling units;</li> <li>Facilities that serve the integrated transport system (stations), and;</li> </ul>



Category	Description
	<ul style="list-style-type: none"> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Proposed Methodology and Data Improvements	<p>Once the information becomes available, the indicator will be updated according to the following proposed calculation process:</p> <ul style="list-style-type: none"> <li>Spatial calculation which determines the relation between the number of dwelling units within 800m of an integrated public transport system within the integration zone and the total number of dwelling units within the integration zone.</li> <li>(Number of dwelling units within the integration zone located within 800m of public transport access points) / (Total number of dwelling units within the integration zone) x100.</li> <li>The city identifies the need to calculate and report on the above-mentioned indicator and intends to source the required information from the Department of Human Settlements and the Department of Roads and Transport.</li> </ul>

### 26.1.4 Productive Cities

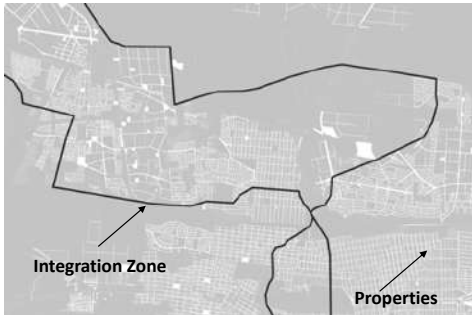
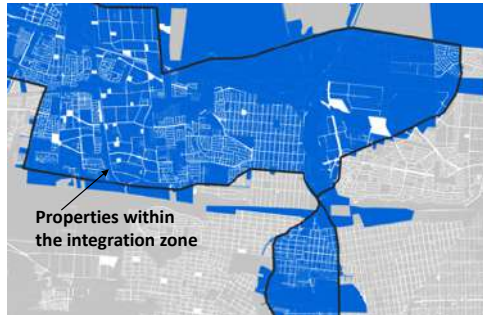
The following BEPP Performance indicators are focussed towards achieving productive cities and aims to evaluate and track the following key objectives:

- Growing city economies;
- Increased city productivity;
- Decoupling of non-renewable energy inputs from economic growth; and
- An enabling business environment.

Table 56 outlines one of the performance indicators which aims to achieve the above-mentioned objectives and outcomes, together with the categories as outlined in Chapter 26.1.

Table 56 BEPP Indicator Number PC4

Category	Description
Indicator Description	Commercial and industrial rateable value within integration zone for a single metro as a % of overall commercial and industrial rateable value for that same metro (PC4).
Target	<p>To calculate the percentage of rateable value for commercial and industrial land use within the integration zone, in relation to the total rateable value for commercial and industrial land use city wide.</p> <p>The outcome of this indicator aims to establish the rate of economic activity within the integration zone. The comparison between rateable value of commercial/industrial land within the integration zone to that of the entire city indicates a proxy measure of the extent and intensity of commercial and industrial activity within the integration zone. The target should be calculated and expressed as a percentage value.</p>
Source Data	<p>The source data includes the following and has been sourced from Metropolitan Corporate Geo-Information Management (Corporate GIS):</p> <ul style="list-style-type: none"> <li>Valuation Role for 2018, which includes land use classifications.</li> <li>Cadastral Information which links with the valuation role information for 2018.</li> <li>BEPP Integration Zones as delineated in Section B.</li> </ul>
Data Integrity and Comments	The 2018/19 BEPP document did not include the PC4 indicator, due to unavailability of data. Although data has been collected successfully for purposes of the 2019/20 BEPP document, the valuation role only indicates the value of properties for the 2018 year. Based on the

Category	Description										
	availability of data, the PC4 indicator will be calculated for the 2018 year only and will not include the establishment of trendline data ranging from 2016/17 – 2020/21.										
Methodology	<p>To calculate the above-mentioned indicator, spatial intersect queries and calculations were required in order to identify commercial and industrial land located within the integration zone. The valuation role for 2018 was spatially joined to the cadastral information which allowed for spatial calculations pertaining to the relation between commercial and industrial land property values and the integration zone.</p> <div><div><p><b>Original Source Data</b></p><p>Integration Zone</p><p>Properties</p></div><div><p><b>Properties Intersecting the integration zone</b></p><p>Properties within the integration zone</p></div></div> <p>To achieve a result which indicates the percentage of commercial and industrial property values within the integration zone for 2018/19, the commercial and industrial property values within the integration zone was divided by the total commercial and industrial property values city wide in order to achieve a percentage rand value.</p> <p><i>((Commercial rateable value of land in integration zone) + (Industrial rateable value of land in integration zone)) / ((Commercial rateable value of land city wide) + (Industrial rateable value of land city wide)) x100</i></p>										
Results	<p>The results of the indicator could not be interpreted for purposes of the 2019/20 BEPP submission, due to the limitation factor mentioned above. The valuation role only indicates property values for 18/19 and cannot be used to establish an increase or decrease in property value.</p> <p>Targets:</p> <table><tr><td>16/17 data</td><td>17/18 target</td><td>18/19 target</td><td>19/20 target</td><td>20/21 target</td></tr><tr><td></td><td></td><td>19%</td><td></td><td></td></tr></table>	16/17 data	17/18 target	18/19 target	19/20 target	20/21 target			19%		
16/17 data	17/18 target	18/19 target	19/20 target	20/21 target							
		19%									
Proposed Methodology and Data Improvements	<p>Due to the nature of the datasets, this indicator could not be calculated in an accurate manner and was based on information available for 2018/19 only. To calculate a more accurate indicator, which conforms to the requirements as set out in the 2018/19 BEPP Guideline, value of properties is required from 2016/17 – 2019/20.</p>										

## 27 Institutional Arrangements

### 27.1 Circular 88 Reporting

#### 27.1.1 Background

National Treasury (NT) issued the C88 on the Rationalisation of Planning and Reporting Requirements in November 2017 based on the Municipal Finance Management Act, No. 56 of 2003 (MFMA) requirements. The main objective of the circular was to promote standardisation of planning and

reporting as well as to support the alignment of planning and reporting instruments for a prescribed set of municipal performance indicators.

C88 provides guidance and assistance to metropolitan municipalities on the preparation of statutory planning and reporting documents required in terms of the MFMA and MTREF. It is designed for all municipalities but currently being piloted in metropolitan municipalities. The Municipal Systems Act (MSA), and the MFMA require alignment between planning and reporting instruments such as the Integrated Development Plan (IDP), Service Delivery and Budget Implementation Plan (SDBIP) and the Annual Report (AR).

The content of C88 is informed by a performance reporting reform initiative undertaken by National Treasury, in collaboration with the Department of Cooperative Governance and Traditional Affairs (COGTA), the Department of Planning, Monitoring and Evaluation, Statistics South Africa and also in consultation with Auditor-General of South Africa (AGSA). The intention of this reform is to rationalise the reporting requirements of metropolitan municipalities in terms of statutory requirements of the IDP, SDBIP and Annual Performance Report (APR).

Despite not having the prescribed set of C88 indicators in the SDBIP for the first year of implementation (2018/19), the City had included the indicators as an appendix in its plans in order to work towards integration of such circular into the City's formal planning and reporting processes. These indicators are currently included in the approved SDBIP for the 2019/20 FY; however, such does not form part of the actual SDBIP and is essentially presented as a separate set of indicators for monitoring and reporting. The C88 scorecard is expected to be integrated into the City's SDBIP as from Quarter 3 (Q3) of the 2019/20 FY. The statutory adjustments processes are underway and will be finalised and approved by council in Q3. The City is expected to achieve full compliance for all Tier 1 and Tier 2 indicators and these indicators shall be subjected to the audit processes (internal and external audit).

### **27.1.2 Planning Process for Circular 88 Indicators**

The planning and performance reporting on these indicators are centrally coordinated and managed by the City Strategy and Organisational Performance Department. The specific planning division, being Strategy Development and Implementation (SDI), is responsible for the planning processes and tasked with ensuring seamless integration of C88 into the SDBIP.

The planning process on these indicators is informed by the City's SDBIP Planning Process Plan which is conducted annually. The compendium of C88 indicators issued by the NT includes the following types of indicators and requires setting of targets and performance data to be produced quarterly and annually in their prescribed templates:

- Outcome Indicators;
- Output Indicators;
- Governance Reporting Indicators;
- Governance Compliance Questionnaires; and
- Transformational (BEPP) Indicators.

The initial indicators dictated by NT were subjected to implementation and assessment by the pilot metropolitan municipalities during a prior period.

The methodology to calculate these indicators was set primarily by NT through the prescribed Technical Indicator Descriptions (TIDs) and by the City, at a lower level of influence, in the form of a System Description providing guidance on the implementation process and the envisaged outcome and output results. The System Description focuses on the activities supporting the functioning of a KPI and is there not suitable as a guidance tool for data element-based information.

The following planning challenges were noted:

- Constant revision and repeal of indicators by NT;
- Poorly designed indicators;
- Setting of incorrect targets;
- Poorly designed TIDs for the indicators;
- Inadequate content documented in TIDs;
- Lack of support from NT;
- Inadequate or incomplete content provided in system descriptions; and
- Outdated or inappropriate content in system descriptions.

### **27.1.3 Reporting on Circular 88 Indicators**

In capacitating municipalities to report on the C88 indicators, NT issued the reporting templates to standardise the reporting on a quarterly and annual basis. The City has also developed a corporate reporting system in line with the MFMA C88; Circular 13; and Circular 63 reporting requirements. The City is expected to report in full compliance with the MFMA C88 reporting requirements. The city is therefore currently undergoing a process of adoption of Circulars 13, 63 and 88 by council in order for such to be treated and considered a formal governance-based regulation. The City has attempted compliance with such circulars in the past and this process of approval seeks to formalise compliance with the circulars that has already been occurring.

In an attempt to respond to the reporting requirements of NT on these indicators, the City collects information from line function departments in line with the reporting areas without subjecting the performance information (evidence supporting the purported results) to the quality assurance processes that are normally undertaken when processing the quarterly SDBIP compliance reports. This limitation is attributed to time constraints and capacity limitations which do not allow for the implementation of the assurance procedures conducted when processing compliance reports.

In the first year of reporting on C88 indicators the City has experienced some challenges and could not report with full compliance with MFMA C88 due to the following reasons:

- Data availability challenges which was predominantly experienced by most of the metros indicating that these indicators are not yet ready for reporting. This includes the 16 BEPP indicators;
- Shared responsibility with the National Departments; Agencies; and other Public Entities. Indicators and Data Elements for which data access is outside the control of the Municipality;

- Errors emerged in the development of the Indicator which have been detected in the course of implementation and reporting;
- TID weaknesses that led to inconsistent reporting which required some corrections;
- Some indicators had definitional errors which required some updates;
- Transformational/BEPP Indicators also was also found to have inadequate definitional clarity; and
- Inconsistencies in the reporting frequency.

The Organisational Performance Management (OPM) Division of CSOP is responsible for the monitoring and reporting of the City's performance measures at various levels including Corporate, Departmental and C88. It should be noted that the levels and types of reporting may not be exhaustive and may therefore be allocated to task teams/ units as a specialist reporting function. An example of this is the Back-to-Basics reporting conducted by the City which is not currently the function of OPM.

#### **27.1.4 Operational Reporting Challenges**

The following are challenges encountered operationally in the management of C88 reporting:

- Poorly designed indicators make it difficult to source the essential and correct data;
- Late reporting due to nature/ dependencies of certain indicators;
- Reporting timelines set by some of the input departments compromises the completeness of the information needed for the reporting period;
- Malicious reporting by some of the input departments resulting in unreliable information;
- Incomplete reporting of required data fields which prolongs the reporting deadline;
- Reporting nonsensical and incorrect information;
- Lack of targets set on some of the indicators making performance assessment impossible;
- Challenges with ownership of indicators thus complicating the collection of required information;
- The quality of reasons cited for variances, proposed remedial action and explanations where reporting information cannot be provided requires a lot of attention to ensure that the statements sponsored are sound; and
- Lack of cooperation by some departments.

Based on the aforementioned challenges experienced, the National Treasury has issued an addendum to be applied in the 2020/21 Financial Year which includes the following:

- Changes to the indicator TIDs;
- Changes to the indicator moving from one Tier to another;
- Clarified indicators definitions; and

- Reporting frequency changes.

According to the addendum issued by the NT on the 04 December 2019, the BEPP indicators are now moved from Tier ½ to Tier 3 or 4. These updates will apply to the planning and reporting for the 2020/21 Financial Year.

### **27.1.5 Conclusion**

The City must implement tailored improvement plans based on the areas where performance recorded did not meet the expectation as per the targets set for the period under review. Each affected line function department and entity must implement performance improvement plans to mitigate against the root causes of the negative variances/ deficiencies on targeted performance.

And finally, National Treasury needs to improve the overall management of C88 and ensure thorough testing and analysis prior to roll-out and thereafter efficient and effective support regarding challenges being encountered by the City.



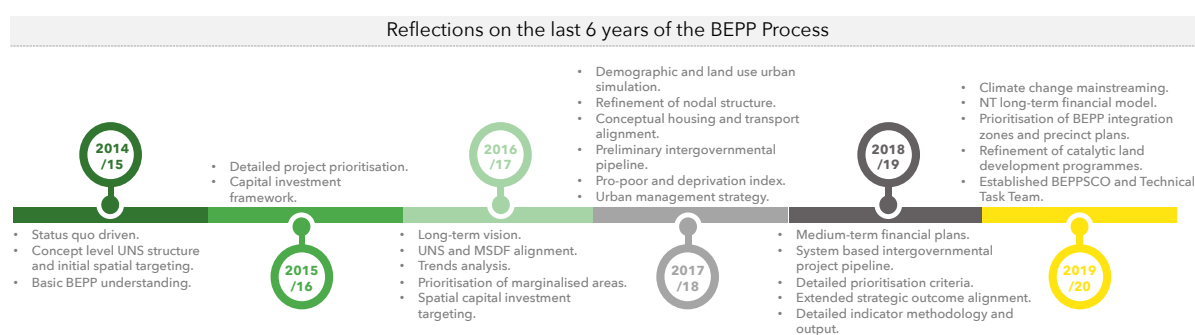


Section H: City's Approach to Transitioning out of the BEPP

## Section H: City's Approach to Transitioning out of the BEPP

The BEPP was first introduced in the 2011/12 financial year as an eligibility prerequisite for the Urban Settlements Development Grant (USDG). During the 2014/15 financial year the City adopted the BEPP as a formal annual reporting process, through the submission of the 1st council approved BEPP in April 2015. Since its origin, the BEPP has progressed and improved substantially with each submission focussing on improving the institutional reform together with incorporating new planning, implementation and management concepts to its annual budgeting process. Figure 98 below outlines a timeline indicative of key focus areas addressed for each submission, ranging from 2014/15 – 2019/20.

Figure 98 City of Tshwane Built Environment Timeline



The 1st submission for the 2014/15 financial year strongly focussed on understanding the concept of an urban network structure, within the context of the status quo assessment of the City, together with the requirements of what constitutes a BEPP. The second and third submissions started incorporating tools to apply spatial targeting objectives to the annual planning and capital budgeting process, through the implementation of a Capital Investment Framework (CIF) and a detailed spatially enabled prioritisation process. The third submission of the BEPP further focussed on aligning the UNS with the MSDF and enhancing the detailed prioritisation process through spatial capital investment targeting.

During the 2017/18 financial year, the focus of the BEPP shifted dramatically towards refining spatial targeting and introducing inter-governmental planning and project pipelining. For the 2018/19 and 2019/20 submissions, the BEPP's submitted by the City started to focus on longer-term planning with the introduction of medium- to long-term financial planning, financial modelling and financial sustainability strategy. The latest submission of the BEPP also introduced the concept of climate change mainstreaming to the annual budgeting process.

For the 2020/21 reporting period, the City Support Programme (CSP) released a rationale for transitioning out of planning reforms and BEPPs. Based on this, Metropolitan Municipalities will no longer be required to submit a BEPP document after the 2020/21 reporting period. The 2020/21 submission should however contain a key focus on the adoption and acknowledgement of planning reforms.

## 28 Transitioning Framework

Planning reforms refer to proposed changes to activities and institutional arrangements within an organisation in order to achieve strategic goals and targets set by the organisation, and could typically

include annual planning and budgeting, implementation, strategy and target settings, reporting and governance. It is further very important that local planning reforms align and integrate with the current planning reform initiatives proposed and implemented by provincial and national government which include the review of the IDP guidelines, the incorporation of Khawuleza District Development Model (2019) and longer-term frameworks and strategies.

Based on the transitioning out of BEPP rationale, and the requirements set out by CSP, the City has opted to include a transitioning framework as Section H to the 2020/21 BEPP submission. The objective of the framework is to first acknowledge the Theory of Change set out by the City in Section A, and secondly to identify the context in which to implement this.

The following section has been structured to discuss the City's interpretation of the Theory of Change, elements of planning and the BEVC. There is a direct correlation between the three topics, with the Theory of Change creating the context and the elements of planning and BEVC providing guidance on achieving certain deliverables. In conclusion, implementing the City's Theory of Change will be aligned to existing institutional processes which include the annual IDP and MTREF budgeting process.

## **28.1 Actioning the Theory of Change**

The starting premise for the City's transitioning framework resides in reforming internal planning, budgeting, implementation and management processes through the adoption of a Theory of Change. The City has introduced its' Theory of Change as part of the 2020/21 BEPP and is built on three key principles, namely:

- spatial transformation;
- financial sustainability, and;
- collaborative planning, implementation and management.

With reference to the transitioning out of BEPP rationale and the 2018/19 core guidance note, the City has initiated the framework with a broader approach which aims to combine the elements of planning and the BEVC. There is a direct correlation between both, with each providing guidance to planning, resourcing and implementation theory within the built environment. Based on the elements of planning and the theory behind the BEVC, the City has aligned its Theory of Change to support the notions of outcomes-led planning, strategy-led budgeting and governance. Each notion builds on a set of spatial or strategic foundations inclusive of spatial development frameworks, strategic guidance and tools to facilitate certain outcomes.

Through the process of establishing the transitioning framework and incorporating the actions and outcomes identified for each principle, a number of interventions were identified. These interventions reconsider the Theory of Change principles, by coalescing actions and outcomes into a set of clear-cut objectives which in turn directly addresses each component of the BEVC. Figure 99 below outlines the Theory of Change principles, together with the anticipated actions and outcomes, in relation to the interventions identified by the City through its transitioning framework.

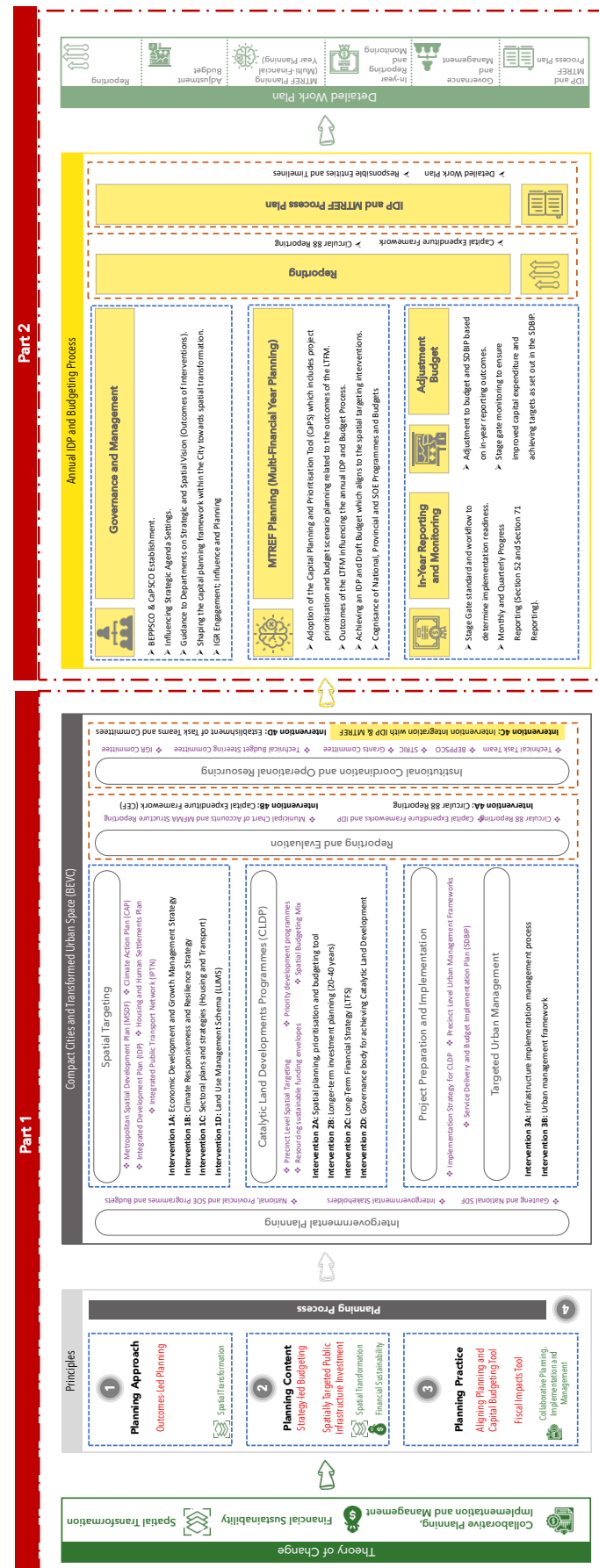


Figure 99 City of Tshwane Theory of Change Principles and Interventions

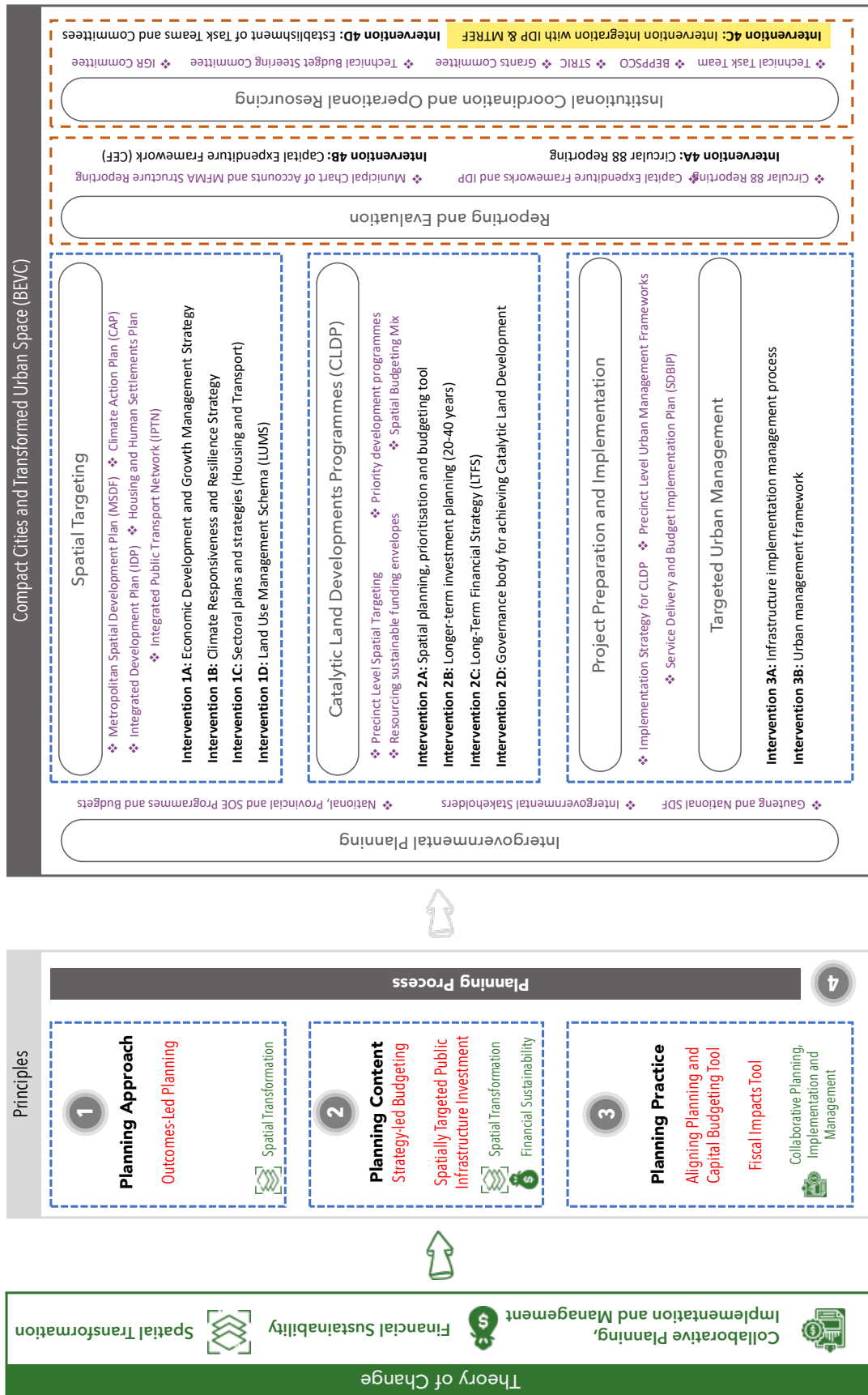


Building on these interventions, the diagram below (Figure 100) illustrates the City's Theory of Change as the starting premise to reforming internal planning processes. The first segment outlines the relation between the Theory of Change and the outline of the framework, in line with each principle identified by the City. The second segment further shapes these principles into the elements of planning which corresponds to the third segment outlining the BEVC components. Each of these components further include a number of spatial or strategic foundations in order to progress to the above-mentioned interventions.

Figure 100 City of Tshwane Transitioning Framework



## Part 1





## Part 2



### 28.1.1 Planning Approach and Spatial Targeting

The 1st TOC element of planning describes the planning approach which primarily stimulates outcomes-led planning in line with the City's spatial structuring outline. Section B of the BEPP outlines the current Urban Network Structure (UNS) and how this relates with the City's spatial vision outlined in the MSDF. Through contextualising the principle of spatial transformation and the current spatial structure of the City, the following interventions were clustered into the spatial targeting BEVC component:

- **Intervention 1A** - A clear Economic Development and Growth Management Strategy which should guide and promote intergovernmental planning and implementation together with promoting private investment opportunities and delivering services;

- **Intervention 1B** - Climate Responsiveness and Resilience Strategy based on the Climate Action Plan (CAP) that is currently being developed for the City. The focus of the strategy should include the operational, planning and implementation of programmes which mitigate risks associated with climate change and achieving a climate change budget;
- **Intervention 1C** - Review of existing sectoral plans and strategies, with specific reference to the integrated planning approach between Human Settlements (Housing) and Transport. To date there has been a disjoin between the planning approach undertaken through the City's key line-departments, which include roads and transport and housing and human settlements. To address this, the City needs to restructure its current approach to collaborative planning with a strong emphasis on aligning transportation planning with housing and vice-a-versa, and;
- **Intervention 1D** - Review of the current Land Use Management Schema (LUMS) which applies the spatial vision and strategy outlined in the MSDF and combines the implementation of the above-mentioned interventions.

The above-mentioned sectoral plans and strategies have not yet been realised within the City, however through the review of the MSDF in 2019, the City has started engaging with infrastructure departments to try and understand the planning regime applied. The review of the MSDF also afforded the opportunity to engage with the City Sustainability Unit (CSU) and the Environmental Management Department. The outcomes of these engagements were incorporated into the MSDF to some degree but will need to be revisited once the CAP has been adopted through Council. Refer to Section A and B for more detail pertaining to the CSU and the climate change profile of the City.

The City has also used the BEPPSCO and Technical Task Team forums to engage with transport and housing departments on the principles of the BEVC and to guide them to incorporate the spatial and strategic vision of the City to inform their MTREF planning approach. These engagements occurred through the IDP and MTREF process outlined in the detailed workplan, with the latest engagements focusing on the integration of sectoral plans to initiate intervention 1C. Refer to Section B for more information regarding the above, and Section A on the establishment and functions of the BEPPSCO and Technical Task Team. The agenda's, minutes and attendance registers for the above-mentioned engagements are included in Addendum 5.

### 28.1.2 Planning Content and Catalytic Land Development

The 2nd TOC element of planning describes the content and actioning of spatial transformation towards achieving precinct level spatial targeting and applying strategy-lead budgeting. Section C of the BEPP outlines the methodology applied by the City to delineate and identify Catalytic Land Development Programmes (CLDPs), whereas Section D outlines the resourcing of funding and achieving a targeted spatial budgeting mix. Through contextualising the principles of spatial transformation and financial sustainability, the following interventions were clustered into the CLDP BEVC component:

- **Intervention 2A** - Adoption of a spatial planning, prioritisation and budgeting tool to build on the principles of spatial transformation and financial sustainability. This tool should strengthen spatial transformation through prioritising capital investment in line with catalytic land development and incorporate available funding envelopes derived from the City's long-term financial strategy. This tool should also be used to inform inter-governmental planning and implementation, in order to safeguard alignment between the spatial and strategic focus of the City and national/provincial government.

- **Intervention 2B** - Realisation of a planning regime which requires departments to do longer-term investment planning (20-40 years) inclusive of pre-feasibility and feasibility operational budget, implementation capital budget and post-implementation and maintenance operational budget. Through realising this planning regime, the entire life-cycle cost will be considered for purposes of understanding the current operational and capital demand within the City as well as the impact of the entire life-cycle project costs on the financial sustainability of the City.
- **Intervention 2C** - Adoption of a Long-Term Financial Strategy (LTFS) which will guide and facilitate integrated sustainable resourcing of capital investment. Utilisation of a Long-term Financial Model will ensure a sustainable funding mix and the implementation of an integrated capital investment budget which supports spatial transformation and economic growth.
- **Intervention 2D** -The establishment of a committee or governance body which administers the process of achieving catalytic land development, which is spatially transformed, and in line with the provisions and recommendations of the LTFS. Through governing this process, the City will ensure that public infrastructure investment and private sector investment is focussed towards spatially targeted areas and fast tracking of capital investment.

One of the functions of the Long-term financial model (LTFM) is to model the current financial sustainability position of the City, based on a number of inputs such as pre-audited or audited financial statements, revenue collection rates, economic conditions and climate, customer-base profiling etc. The outputs from the LTFM provides a basis and serve as input in developing a LTFS for the City. The LTFS serves as a medium- to long-term financial roadmap for the City and provides strategic direction on financial management and policy choices to be considered for implementation to improve and sustain the financial position of the City.

On 14 March 2017, the World Bank Group offered a Short-Term Consultancy Appointment to four consultants associated with INCA Portfolio Managers (“IPM”). The assignment entailed assistance with the preparation of long-term financial strategies for metropolitan municipalities in South Africa - the Long-Term Financial Strategy Project (“LTFS”, or the “Project”), a project of the Cities Support Programme (“CSP”) of National Treasury (“NT”). As part of the Project, a long-term financial model was developed to support metropolitan municipalities in managing its financial sustainability over the longer term. The City of Tshwane, being one of the pilot metropolitan municipalities for the WB assignment, prioritised the operationalisation and institutionalisation of the long-term financial model developed by INCA Portfolio Managers (Pty) Ltd.

The City was fortunate to have the full benefit of both the CaPS system (commercially known as the CP3 – Collaboration, Planning, Prioritisation and Performance) and the LTFM. These two processes were designed to integrate and feed data and analysis outputs into each other and Tshwane was regarded as the pioneer in spearheading the complete and legislatively compliant process of aligned long-term financial modelling and spatially targeted capital budgeting.

The majority of the above-mentioned interventions have been introduced within the annual IDP and MTREF process plan, through the adoption of the Capital Planning and Prioritisation tool (CaPS). The use of the CaPS system allows for spatially enabled capital project planning and conforms to the requirements of mSCOA, FIPDM and life-cycle planning and budgeting. Further application of the tool allows for the prioritisation of capital demand in line with catalytic land development areas and budget scenario development within the constraints of the City’s long-term financial model outputs. This is achieved through the CaPS budget scenario module which incorporates the sustainable affordability envelope and the optimal funding mix to fund prioritised programmes or projects. The

CaPS tool has matured to also include an approach to planning the entire project life-cycle expenditure from inception (pre-project operational expenditure) to post-implementation (operational and maintenance expenditure). For more information pertaining to the implementation of the CaPS tool and the LTFM, refer to Section C and D.

Intervention 2D refers to the establishment of a committee which oversees the process of achieving catalytic land development. On the 7th of August 2019 the city formally tabled the establishment of the Tshwane Strategic Investment Committee (STRIC), which is situated within the Executive Steering Committee (Exco) as a sub-committee. The rationale of the committee has been outlined in Section A and the formal adoption of the committee has been included in Addendum 2.

### **28.1.3 Planning Practice, Project Implementation and Urban Management**

The 3rd element of planning describes the practice in which the planning approach and content is applied and refers to the implementation of CLDPs together with the urban management structures in place to manage specific spatial targeted precincts. Section E and F of the BEPP outlines the current implementation processes in place, as well as the City's current approach to urban management after implementation. Through contextualising the principle of collaborative planning, implementation and management, the following interventions were clustered into the project preparation and targeted urban management BEVC component:

- **Intervention 3A** - Adoption of an infrastructure implementation management process which aligns with National Treasury's Framework for Infrastructure Delivery and Procurement Management (FIPDM). The implementation of targeted capital investment projects should align to structured procurement processes and mitigate risks associated with implementation readiness, cash-flow management, time and quality of services rendered.
- **Intervention 3B** - Establishment of an urban management framework which specifically caters to the specific needs or characteristics present within spatially targeted precincts.

The project preparation process involves the evolution of capital projects from inception phase to close-out and is identified through a number of municipal strategies and economic or spatial priorities. The city has identified the need to implement effective tools and techniques in order to apply sound project management practices which aligns to the FIPDM framework. The city has established a Stage Gate Standard and Workflow Process which aims to assist in the identification, strategic alignment, prioritisation, budget approval and execution of all capital projects within the city. In order to support this process, the CAPS system has been configured to facilitate the Stage Gate standard and workflow as part of the annual budgeting process as well as the in-year reporting and monitoring process. For more information pertaining to the Stage Gate standard and workflow process, refer to Section E which includes the formal adoption of the standard on the 25<sup>th</sup> of April 2019.

### **28.1.4 Planning Process, Institutional Coordination, Reporting and Consolidation**

The last element of planning refers to the planning process and organisation coordination in its entirety and should not be regarded as an element on its own. It is the result and management of the above-mentioned elements and culminates the outcome of each in the form of annual reporting and monitoring. To achieve this, the City has to integrate the above-mentioned interventions as a part of its annual planning and budgeting cycle and ensure the execution of outcomes-led planning and strategy-led budgeting. Governing this and ensuring compliance to legislative requirements involves the following interventions:

- **Intervention 4A** - Adoption of C88 Reporting, inclusive of the built environment performance indicators, as part of the City's annual planning and IDP process. This ties into the reporting framework of the City and will ensure timeously submission of these indicators with the annual submission of the MTREF and the IDP.
- **Intervention 4B** - Review of the Capital Expenditure Framework (CEF) which complies with the requirements as legislated in SPLUMA. The structure of the CEF builds on the three elements of planning referred to above and includes a spatial development vision, socio-economic/spatial profiling and demand quantification, planned capital expenditure by discipline, long-term financial plan, prioritisation, spatial analysis, asset-based analysis and poor and non-poor household capital expenditure targeting ratios.
- **Intervention 4C** - Integration between the interventions and outcomes identified above. This will ensure an annual planning and budgeting process which incorporates the Theory of Change and achieves the strategic and spatial vision as set out in the City's Tshwane Vision 2030 and MSDF.
- **Intervention 4D** - The establishment of Technical Task Teams and Committees to guide the annual planning and budgeting process and to provide guidance to the City with regards to the spatial and strategic vision. This provides the framework in which to guide and assist City departments in planning capital expenditure, monitoring and managing project implementation and submission of an IDP and MTREF which adheres to the City's Theory of Change.

Despite not having the prescribed set of C88 indicators in the SDBIP for the first year of implementation (2018/19), the City has included the indicators as an appendix in its plans in order to work towards integration into the City's formal planning and reporting processes. Refer to Section G for more information pertaining to the City's approach in adopting C88 indicators and the reporting format.

In addition to the reporting of C88, the City has reshaped its approach to the 2020/21 BEPP to align to the format of a Capital Expenditure Framework (CEF). This was done in line with the requirements of SPLUMA and includes the foundation to substitute the current BEPP document with a functional CEF. The City has also achieved capital investment planning which spans further than the MTREF period with the inclusion of a budget scenario which analysis a 10-year funding horizon (refer to Section D). However, the City still needs to establish the following to achieve a CEF which fully aligns with legislated requirements:

- Identification of Functional Areas within the City as well as aligning/updating the existing Priority Development Areas with the reviewed MSDF.
- Compiling land demand and infrastructure investment requirements (Demand Quantification) which outlines socio-economic demand for the next 10 years, with guidance from the City Infrastructure Delivery and Management System (CIDMS).
- Analysing the split between the demand, modelled demand quantum and the available funding envelopes obtained from the LTFS/P for the 10-year period.
- Analysing the current asset register for the city and addressing the split between the demand quantification and existing asset capacity.
- Analysing the ratio of capital expenditure between poor and non-poor communities, through the income distribution pattern city-wide.

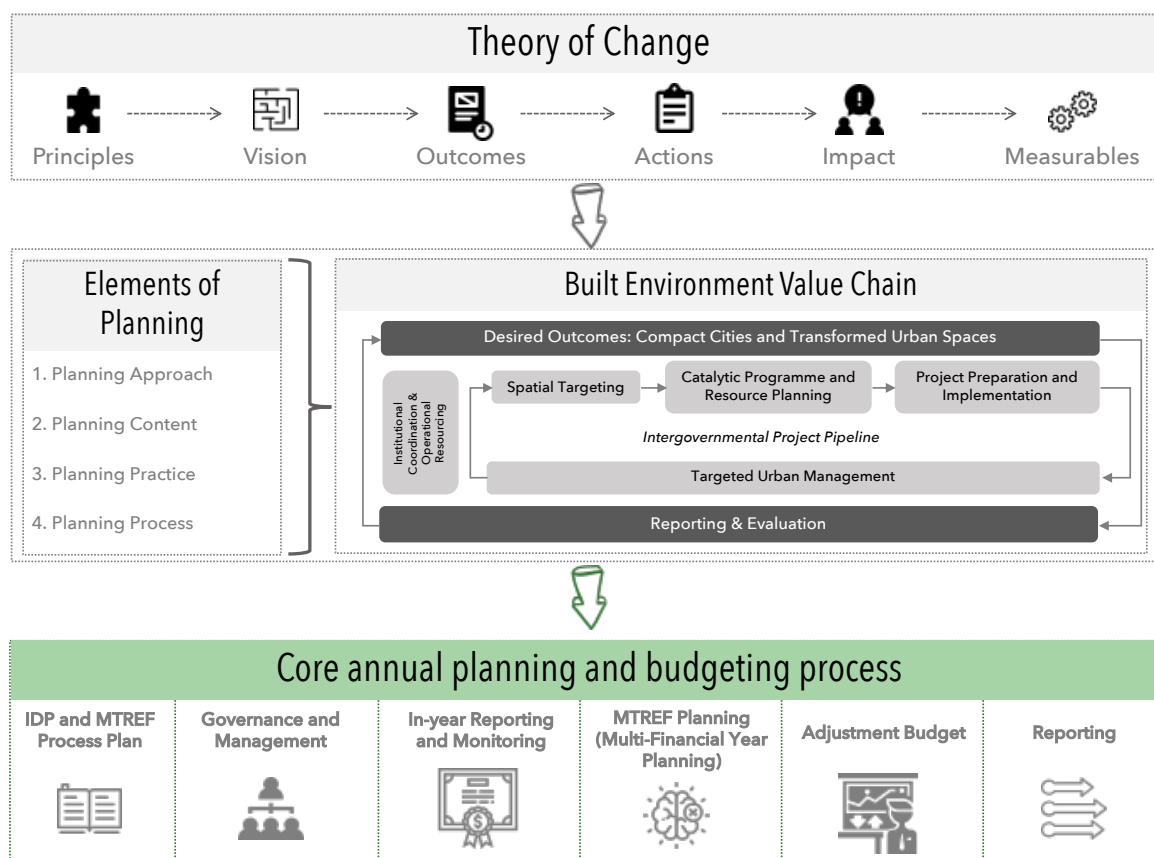
The section to follow (Chapter 28.2) will indicate the City's approach to integrating the above-mentioned interventions or actions to the annual IDP and MTREF process. This addresses intervention 4C, but also requires the establishment of governing bodies (intervention 4D). The CaPS Technical Task Team and BEPPSCO was established during the 2018/19 reporting period and serves as the governing body which guides the process to address and incorporate the outcomes of the above-mentioned interventions. For more information on the Task Team and the BEPPSCO, refer to Section A.

## 28.2 Implementing the Theory of Change

The planning and budgeting process that the City follows is promulgated annually through the approval of the Integrated Development Plan (IDP) and the Medium-term Revenue and Expenditure Framework (MTREF) Process Plan, which is formally adopted by Council during July/August each year. This process plan aligns to requirements as set out by the MFMA (56 of 2003), together with the City adoption of the 2017/21 IDP on the 25th of May 2017 in terms of MSA (32 of 2000). The objective of the annual process plan is to highlight actions and timelines in line with legislative requirements, each indicating governance entities responsible for achieving specific outcomes.

Given the statutory status of the annual IDP process and the establishment of the MTREF, the City has adopted the IDP and MTREF process plan as the core annual budgeting process and applies this policy to promote the Theory of Change and required interventions. The following section will highlight the core annual budgeting process, with the aim of identifying a practical approach to implementing the transitioning framework. Supplementary integration refers to the City's Theory of Change together with principles of planning, budgeting, implementation, reporting, monitoring and evaluation as communicated through the BEPP and BEVC.

Figure 101 Core Planning and Budgeting Process





The diagram above outlines the core annual planning and budgeting process segments and is based on the council approved 2020/21 IDP and MTREF process plan (29 August 2019). Each of these segments includes actions as set out in the IDP and MTREF process plan and initiates the groundwork for the transitioning out of BEPP framework through supplementary integration.

### 28.2.1 IDP and MTREF Process Plan

The preparation or review of the annual IDP, MTREF budget and performance plans require an in-depth understanding and outline of actions and deliverables to be achieved through the course of the financial year. To achieve this City Strategy and Organisational Performance Management (IDP Office) engages with a variety of stakeholders annually to identify and consolidate actions in line with legislated outcomes. This process results in the tabling of the IDP and MTREF process plan and the publication thereof. Table 57 below outlines the actions associated with the IDP and MTREF Process Plan segment and includes the organisational entity responsible for each action as well as associated timeframes.

Table 57 IDP and MTREF Process Plan Actions

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Tabling of the 2020/21 IDP and Budget Process Plan for approval	The IDP and Budget Process Plan which outlines the key deadlines for the review of the 2020/21 IDP and annual budget is tabled to council for approval at least 10 months before the start of the new financial year.	MSA s28, 29 & 34 & MFMA s21(b)	City Strategy and Organisational Performance Management (CSOP), supported by Finance and Economic Development and Spatial Planning	August
Publication of the 2020/21 approved IDP and Budget Process Plan on city's website for public information	Publication of the process plan outlining key deadlines for preparing, tabling and approval of the annual budget and IDP.	MSA s28(3)	City Strategy and Organisational Performance Management; Communication, Marketing and Events	September

The IDP and MTREF process plan segment provides the framework for planning actions and interventions required for the financial year. During this process, the City has the opportunity to integrate interventions 2D, 4C and 4D with the legislated processes to be followed, through establishing or reviewing budget committees and task teams who will lead and guide the IDP and MTREF process. During the 2019/20 reporting period, the CaPS TTT generated a detailed workplan with various deliverables to achieve the milestones and timelines legislated within the MFMA, refer to Chapter 28.3 below.

### 28.2.2 Governance and Management

In order for the City to achieve an annual IDP and MTREF submission, the following segment includes strategic planning sessions which progresses from Mayoral to Departmental planning sessions. The City ensures that targets are met through the establishment of a strategic planning agenda which aligns with the Tshwane Vision 2030 together with engagements between national or provincial sector departments to enable alignment of plans and programmes. Table 58 below outlines the actions

associated with the Governance and Management segment and includes the strategic focus setting for consideration into the MTREF budget.

Table 58 Governance and Management Actions

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Strategic Agenda setting - Mayoral strategic planning session	The Mayoral strategic planning session to focus on the following (1) Presentation and agreement on final proposals for Tshwane Development Strategy 2030. (2) Proposals for required changes/ amendments to the IDP to be aligned to TDS 2030. (3) Evaluation on progress made during the first year of governance of the new administration. (4) Setting/confirmation of priorities/directive/budget principles and strategic guidelines for 2020/21 MTREF and IDP.	MFMA Section 52 (c)	Office of the Executive Mayor and Office of the City Manager	September
City Manager and Top management strategic planning	Unpacking TDS 2030 and formulate short to medium interventions to initiate interventions for inclusion in the IDP review and budget proposals for 2020/21	Internal process	Office of the City Manager and Top Management	September – October
Special MayCo	MayCo discussions on 2019/20 IDP & Budget strategic focus areas Adoption of Prioritisation Model for 2020/21 – 2022/23 MTREF	Internal process	Office of the Executive Mayor supported by ED & SP, CSOP, Budget Office	September to October
Issue adjustment budget guidelines	2019/20 Adjustment budget guidelines will be communicated through a budget circular	MFMA sec 28	Chief Financial Officer	November
Issue budget guidelines	2020/21 MTREF budget guidelines and principles will be communicated through a budget circular	Internal process (informed by NT MTREF budget circular)	Chief Financial Officer	December
Issue tariff guidelines	2020/21 MTREF tariff guidelines will be communicated through a budget circular	Internal process (informed by NT MTREF budget circular)	Chief Financial Officer	December
Session with departments on the Annual Budget process	Session with departmental finance support officials regarding the annual budget process (1) To provide guidance and confirm budget principles and approach for 2020/21	Internal process	Chief Financial Officer	December

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Departmental Strategic Planning Sessions	Departments engage in strategic planning sessions with the focus on the following: (1) Implementation of the Mayoral Strategic Planning and City Manager Top Management strategic planning session 's resolutions. (2) Prioritise projects to be captured on CaPs	Internal Process	All departments	October to 15 December
Budget Steering Committee Hearings	The Budget Steering Committee to conduct an assessment of the 2020/21 submitted targets against (1) The Tshwane Development Strategy 2030. (2) The identified priorities for the City as per Mayoral Strategic Planning resolutions. (3) Budget implications for the submitted plans (including motivations for CAPEX and OPEX projects not catered for by CIF; and (4) Draft Built Environment Performance Plan (BEPP)/Capital Investment Framework (CIF).	MFMA s52 (c) and	Budget Steering Committee supported by CSOP, Economic Development and Spatial Planning and CFO	February
Mayoral Budget Planning Session	The focus of the Budget planning session is to (1) Confirm the capex priorities and make recommendations. (2) Confirm MTREF areas of emphasis to allow for alignment the IDP high level summary.	MFMA s52 (c )	Office of the Executive Mayor	February
Consultation with Mayoral Committee	Presentation of the draft annual budget, draft IDP and first draft SDBIP (inclusive of Entities) for 2020/21	Internal Process	City Manager, CSOPM, Economic Development and Spatial Planning and CFO	March

With the establishment of the CaPS TTT; BEPPSCO and related budget committees, this process includes the governance process together with influencing or guiding the annual strategic vision setting process. This includes the scheduling of monthly or quarterly planning sessions and providing key inputs during mayoral and departmental strategic agenda settings. This opportunity allows for departmental planning and budgeting in accordance with the spatial and strategic visions set out above. During the 2019/20 reporting period, the CaPS TTT generated a detailed workplan which outlines the timelines associated with planning and departmental one-on-one sessions, which includes the process of engaging with provincial and government officials to obtain information pertaining to project planning.

### 28.2.3 In-year Reporting and Monitoring

The process of monitoring project performance ties in with the governance and management segment, but primarily functions in accordance with the Service Delivery and Budget Implementation Plan (SDBIP). The objective of this segment serves as a reporting mechanism to National Treasury,

through the submission of monthly and quarterly reports which indicates the status of project implementation and service delivery (Section 52 and Section 71 Reporting). This is monitored through continued performance reporting against project plans submitted for approval through the MTREF Budget and the SDBIP, in compliance with the MFMA (Act 56 of 2003). Although the IDP and MTREF Process Plan does not specifically highlight actions associated with the monitoring of project performance, it is important to note that the process provides the primary input to the annual mid-year review assessment and guides the mid-year adjustment of the MTREF and the SDBIP.

The establishment of the Stage Gate Standard and Workflow process aligns with the in-year reporting and monitoring process. The introduction of stage gates as part of the in-year reporting process will allow the technical task team, and specifically the project management unit (ePMU), to verify whether projects are in fact ready for implementation. To achieve this, the correct information should be sourced on a monthly basis through existing reporting processes and feed back into the project planning and prioritisation process. This framework addresses Intervention 3A and provides the platform to integrate the Stage Gate Standard and Workflow with the annual IDP and budgeting process. During the 2019/20 reporting period, the CaPS TTT generated a detailed workplan which outlines timelines associated with the in-year reporting process and the implementation of the stage gate management process.

#### 28.2.4 MTREF Planning (Multi-Financial Year Planning)

The MTREF planning segment incorporates the actions set out for most of the annual planning and budgeting process and culminates the strategic and spatial priorities as set out by the City through the IDP. Although the primary outcome of this segment comes in the form of a tabled MTREF budget and IDP, the primary driving force includes guidance to departments on planning; intergovernmental alignment, the capital prioritisation process and funding resourcing. Table 59 below outlines the MTREF planning segment and includes the process of incorporating the strategic and spatial agenda together with determining the MTREF within the City.

Table 59 MTREF Planning Actions

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Departmental training for capturing of capital project requests on CaPS (Capital Demand)	Economic Development and Spatial Planning to engage with departments and popularise the CIF/BEPP to guide departments when capturing project lists.	Internal Process	Economic Development and Spatial Planning, CSOPM (SDBIP and Project) teams.	August/September
Popularising Capital Investment Framework (CIF) and Built Environment Performance Plan (BEPP) to facilitate capturing of projects by departments	Economic Development and Spatial Planning to engage with departments and popularise the CIF/BEPP to guide departments when capturing project lists.	Internal Process	Economic Development and Spatial Planning, CSOPM (SDBIP and Project) teams	August to January

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Issue budget indicatives	Issue indicative OPEX & CAPEX allocations	Internal process	Chief Financial Officer	November
Submission of draft capital project list and expenditure projections	Prioritised Capital budget to be submitted to Budget Office (mSCOA Format)	MFMA sec 16, MFMA sec 19	Economic Development and Spatial Planning Departmental	December–January
Municipal Entities to submit National Treasury (NT) Schedule D (original budget)	The CEO's of municipal entities to submit NT Schedule D to Group Financial Services including mSCOA aligned budget items (Capex and Opex)	MFMA Regulations and Circulars	CEO's of Municipal Entities	January
Departments capture and submit operating budget proposals and business case for new projects/program mes	Departments to capture and submit their budget proposals and confirm mSCOA alignment	MFMA sec 16	Chief Financial Officer	January
Modelling of the Long Term Financial Plan (LTFM)	The LTFM will ensure medium to long term sustainability	Internal process	Chief Financial Officer	January
Publication of draft IDP & Budget and consultations with communities and stakeholders	Consultations for a period of 21 days for comment on the draft IDP and Budget as tabled in Council	MFMA Sections 22 and 23, MSA Chapter 4, s21 A	Office of the Speaker; Office of the Executive Mayor; All departments and Regions	April
1st Draft 2020/21 Business Plan	Departments to submit the draft 2020/21 Business Plan which contains the draft IDP and SDBIP scorecard	Internal Process	All departments and Entities	End April
National Treasury Municipal Budget and Benchmark exercise	Engagement and Benchmark Exercise on the tabled draft IDP and MTREF by National Treasury (1) 2020/21 BEPP Review presentation to NT (2) IDP and Budget Review presentations by all departments to NT	IGR process	National Treasury	April - May
Approval of the Budget, IDP, BEPP/ CIF for 2020/21 inclusive of Municipal Owned Entities	Final approval by Council of the IDP, Budget and BEPP/CIF by resolution, setting municipal taxes and tariffs, changes to the IDP and budget related policies; measurable performance objectives and targets; revenue by source and expenditure by vote.	MFMA Sections 16, 19, 24, 26, 53; MSA Section 38 – 45; MFMA s87	Council	End May

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Approval of the 2020/21 SDBIP	Final approval of the SDBIP by the Executive Mayor.	MFMA Sections 69 (3)a	Executive Mayor	June
Approval of 2020/21 Departmental Business Plans	Consolidated departmental plans including required resources to be approved, this include those of Entities	Internal Process	Mayoral Committee	July

During this process governance and management plays a vital role in guiding departments to plan in accordance with interventions 1A, 1B, 1C and 1D. It also affords the opportunity to incorporate the outcomes of the LTFM (Intervention 2B and 2C) to inform the City's budget scenario template, which builds on the results of the capital prioritisation model (Intervention 2A). The above-mentioned process has been outlined in the detailed work plan established by the CaPS TTT during the 2019/20 reporting period. The detailed workplan also includes the process of reviewing the prioritisation model on an annual basis together with guiding capital planning through one-on-one sessions, facilitated through the BEPPSCO and CaPS TTT (Intervention 4C and D).

### 28.2.5 Adjustment Budget

In terms of Section 28 of the MFMA, municipalities may revise an approved annual budget through the adjustment budget process. The Municipal Budget and Reporting Regulation (MBRR) further states that an adjustment budget may only be tabled after the mid-year budget and performance assessment, but no later than February. Based on this regulation, the in-year monitoring and reporting process should inform the adjustment budget and the consequent adjustment to the SDBIP. Table 60 below outlines the actions required by the City in order to proceed with the adjustment budget and includes guidance to departments with reference to mid-year review process.

Table 60 Adjustment Budget Actions

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Modelling of the Long-Term Financial Plan (LTFM)	The LTFM will ensure medium to long term sustainability	Internal process	Chief Financial Officer	December (to inform adjustment budget)
Capturing and submission of 2019/20 adjustment budget by departments	Departments to capture the 2019/20 revised budget	MFMA sec 28	Chief Financial Officer	November – December
Municipal Entities to submit Schedule E (Adjustments Budget)	The CEO's of municipal entities to submit NT Schedule E to Group Financial Services Department.	MFMA Regulations and Circulars	CEO's of Municipal Entities	December
2019/20 SDBIP Adjustment	Issue SDBIP adjustment communication based on possible adjustment to budget	Internal process	CSOP	December
2019/20 Mid-Year Review Report	The report is submitted to the Mayoral Committee and Council for consideration and approval	MFMA s72(1)	Chief Financial Officer	January



Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
	and will indicate the necessity of an adjustments budget			
Consolidate Adjustments Budget inputs including Human Resources (PCP)	Consolidate Adjustments Budget inputs including Human Resources (PCP)	Internal Process	Chief Financial Officer	January
Preparation of Adjustments Budget Report and Annexures	The report and document is prepared in accordance with National Treasury regulations	MFMA s28 and s29	Chief Financial Officer	January
Submission of report for consideration and approval	Report is submitted to the ExCo, Mayoral Committee and Council for approval	MFMA s28 and s29	Chief Financial Officer	February
National Treasury Mid-year Budget/BEPP Review and Performance Assessment Visit	National Treasury's engagement with the City of Tshwane	IGR process	Executive Mayor; City Manager; Chief Financial Officer; Chief Operations Officer; Group Heads	January - March
2019/20 Adjustment to the SDBIP based on the Mid – year Budget and Performance Review	Council to consider the proposed adjustments to the SDBIP. The approved adjustments to the SDBIP to be submitted to National Treasury post approval by Council	MFMA (1)c s54	CSOP; Council	February

The in-year reporting segment should inform the adjustment budget process, based on the outcomes of the Stage Gate standard and workflow process (Intervention 3A). The adjustment budget process should also include outcomes of the LTFM to ensure a sustainable funding mix as described in Intervention 2C. The detailed workplan for 2019/20 outlines a number of deliverables in order to conduct an informed adjustment budget process.

### 28.2.6 Reporting

The reporting segment specifically entails the preparatory work required to draft the annual IDP report. The annual BEPP submission, which serves as an addendum to the IDP and MTREF, substituted the City's Capital Expenditure Framework (CEF) to date. With the BEPP document no longer required in the form of an annual performance plan, the City has opted to revert back to the submission of a CEF in line with SPLUMA requirements. Table 61 below outlines the actions required to submit an IDP and CEF which complies with the MSA, SPLUMA and the MFMA. This includes the communication of IDP review guidelines in line with the strategic agenda, together with the community and stakeholder consultation process. Although the reporting segment is described separately from the MTREF Planning segment, it is important to note the approval of the MTREF occurs with that of the IDP and BEPP.

Table 61 Reporting Actions

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Issue IDP review guidelines to departments	Guidelines for the review of the IDP prepared based on key focus areas emanating from the strategic planning processes	Internal process	City Strategy and Organisational Performance Management and Chief Financial Officer	October
Stakeholder engagements	Priority setting process with key stakeholders (1) Engagement with Traditional Authorities. (2) Engagement with business sector. (3) Engagement with NGO's and CBO's. (4) Engagement with various stakeholder groups including the Youth.	MSA sec 16 & 17	Office of the Executive Mayor, Office of the Speaker, Office of the City Manager, and City Strategy and Organisational Performance Management	October to January
1st Draft departmental IDP & SDBIP scorecards submitted	All departments and MOE's to submit 1st draft departmental IDP & SDBIP scorecards in line with guidelines provided to CSOP	Internal process	All Departments and MOE's	January
Tabling of the draft IDP, budget (MTREF) and BEPP/CIF	Tabling of draft annual budget, draft IDP together with BEPP/CIF for 2020/21 for noting by Council	MFMA Sections 16 & 17	CSOPM, CFO and ED & SP; MayCo; Council	End March
Submission of Draft BEPP 2020/21 to National Treasury	Submit Draft BEPP 2020/21 (DoRA 20/21) based on the capex submissions from departments (The indicatives as included in the 2019/20 DoRA will be used for the purpose of planning. When the 2020/21 DoRA is issued, all grants (opex and capex) will be updated)	DORA 20/21	Economic Development and Spatial Planning	End March
Refinement and finalisation of the annual budget, IDP and Corporate SDBIP	(1) Based on comments received from communities and stakeholders, finalise the 2020/21 IDP and 2020/21 budget; (2) BEPP/CIF Review process (city's spatial priority programmes in line with Tshwane Development Strategy 2030, grant alignment & intergovernmental budget alignment.	Internal Process	CSOP; Finance department; Economic Development and Spatial Planning department; Top Management and Mayoral Committee	April and May

Action	Details of Action	Legislative Requirement	Responsibility	Timeframes
Submission of BEPP 2020/21 to National Treasury	Submit BEPP 2020/21 (DORA 2020/21) to National Treasury	DORA 2020/21	Economic Development and Spatial Planning	End of May

The reporting segment specifically refers to legislated processes which require the approval of an annual IDP report and MTREF Budget. This affords the opportunity to synchronise annual reporting requirements and addresses Interventions 4A and 4B. It also provides the framework in which to guide departments in terms of the strategic or spatial visions set out by the City and to engage in one-on-one sessions with the aim of collating information for reporting purposes. The 2020/21 detailed workplan outlines the preparatory work required to achieve an IDP and BEPP (CEF) together with the required timeframes to allow for public participation and council approval.

During the 2020/21 reporting period the CaPS TTT, through communication to the BEPPSCO, established a process of reviewing the 2019/20 BEPP. This was done with the aim of promoting integrated planning between departments and to raise awareness of challenges previously experienced during the compilation of the BEPP. Addendum 10 includes the review guidelines.

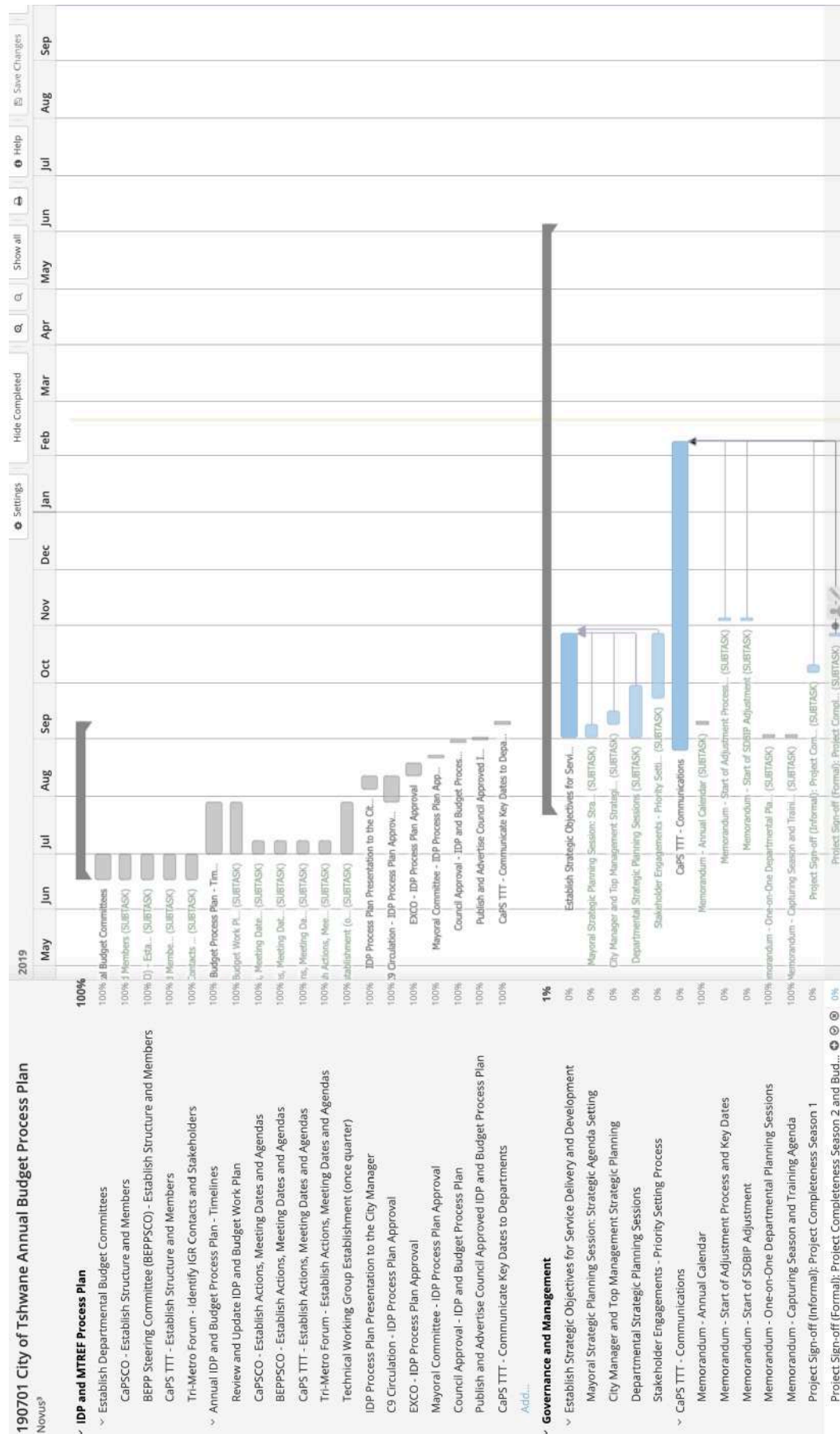
## 28.3 Detailed work plan

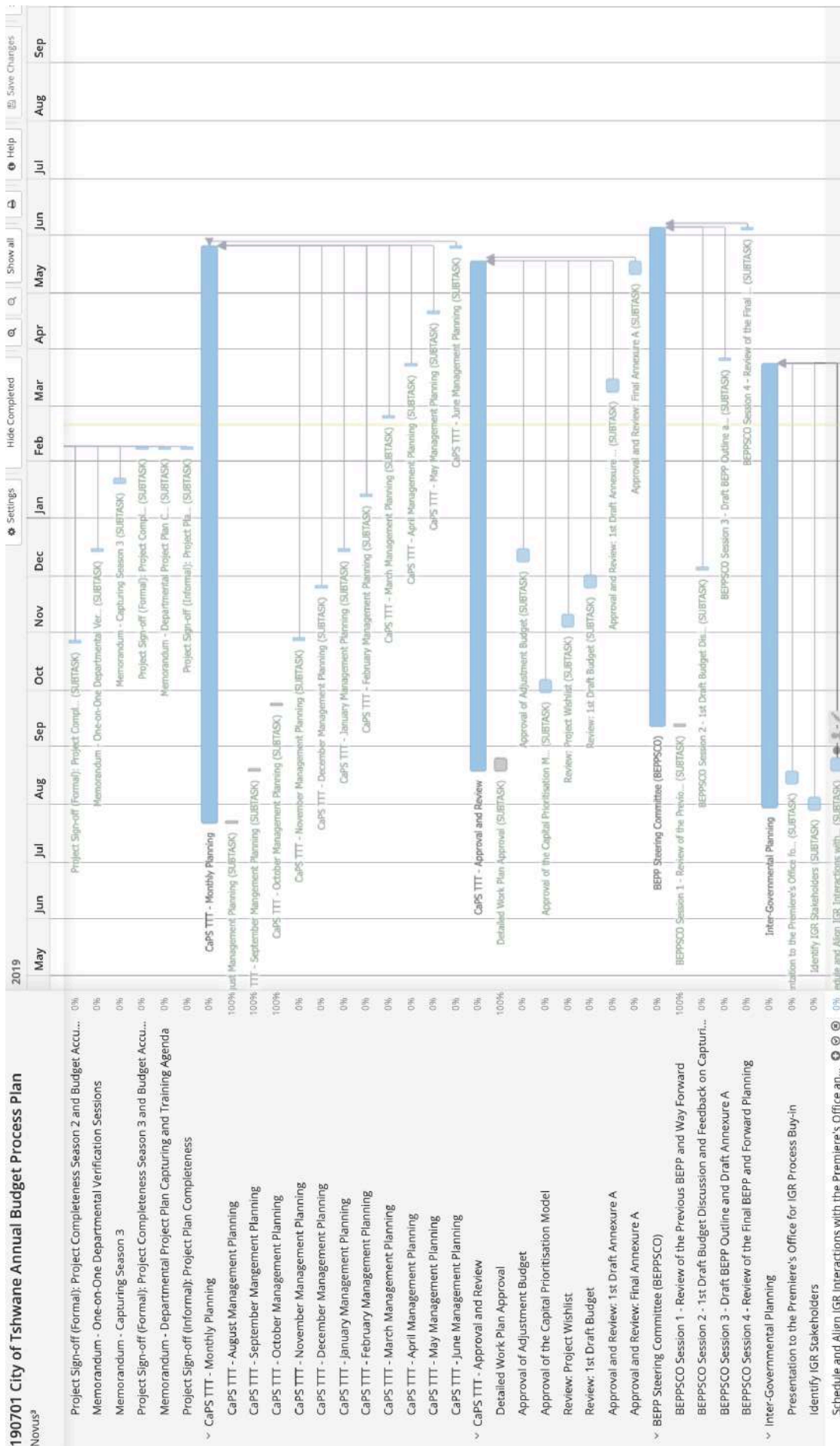
Chapter 28.2 above outlined the core annual planning and budgeting process, based on the IDP and MTREF process plan. During the 2019/20 financial year, the City realised the need to establish a detailed work plan to guide the overarching IDP and MTREF Process Plan and to promote secondary integration. Because the IDP and MTREF Process Plan only describes overarching outcomes of the annual budgeting process, an understanding and acknowledgement of the detailed constituents were required to mitigate risks associated with in the municipal budgeting space. These risks include lapsing milestones or varying timeframes due to external and internal stakeholder influence.

The detailed work plan was designed in consultation with Economic Development and Spatial Planning, Group Financial Services and City Strategy and Organisational Performance Management which includes the IDP office and the Project Management Unit (ePMU). Although the detailed work plan was not formally adopted in the City, the CaPS TTT (refer to Chapter 7.2) adopted the workplan as guidance framework at the start of the 2020/21 financial year.

As indicated above, this workplan serves as the outcome of the transition out of BEPP framework and details secondary integration with legislated processes to achieve the interventions identified by the City. These interventions will ultimately achieve the City's theory of change and incorporate sound planning principles as outlined the BEVC and the 4 elements of planning.

Figure 102 2020/21 Detailed Work Plan

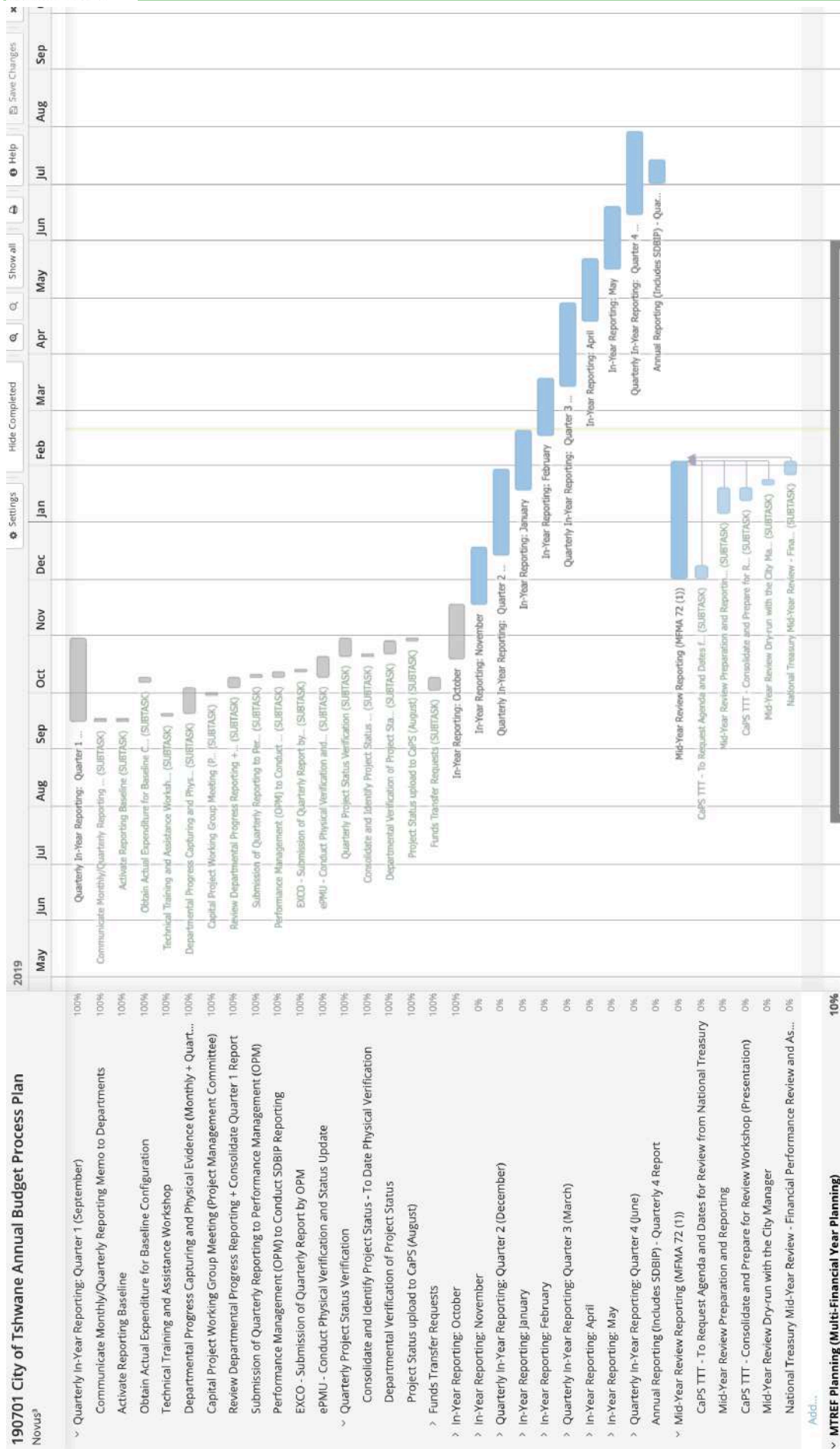


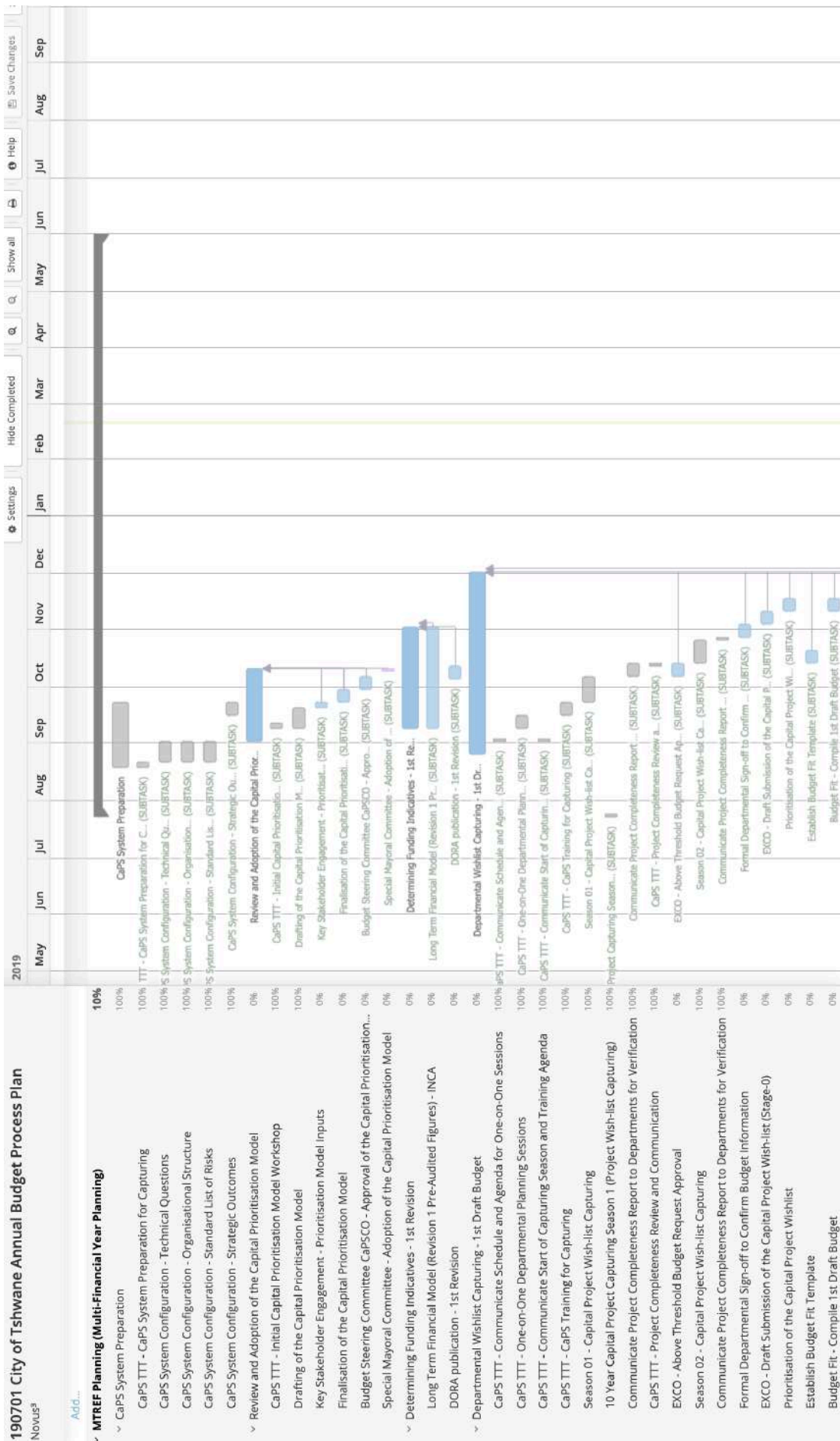


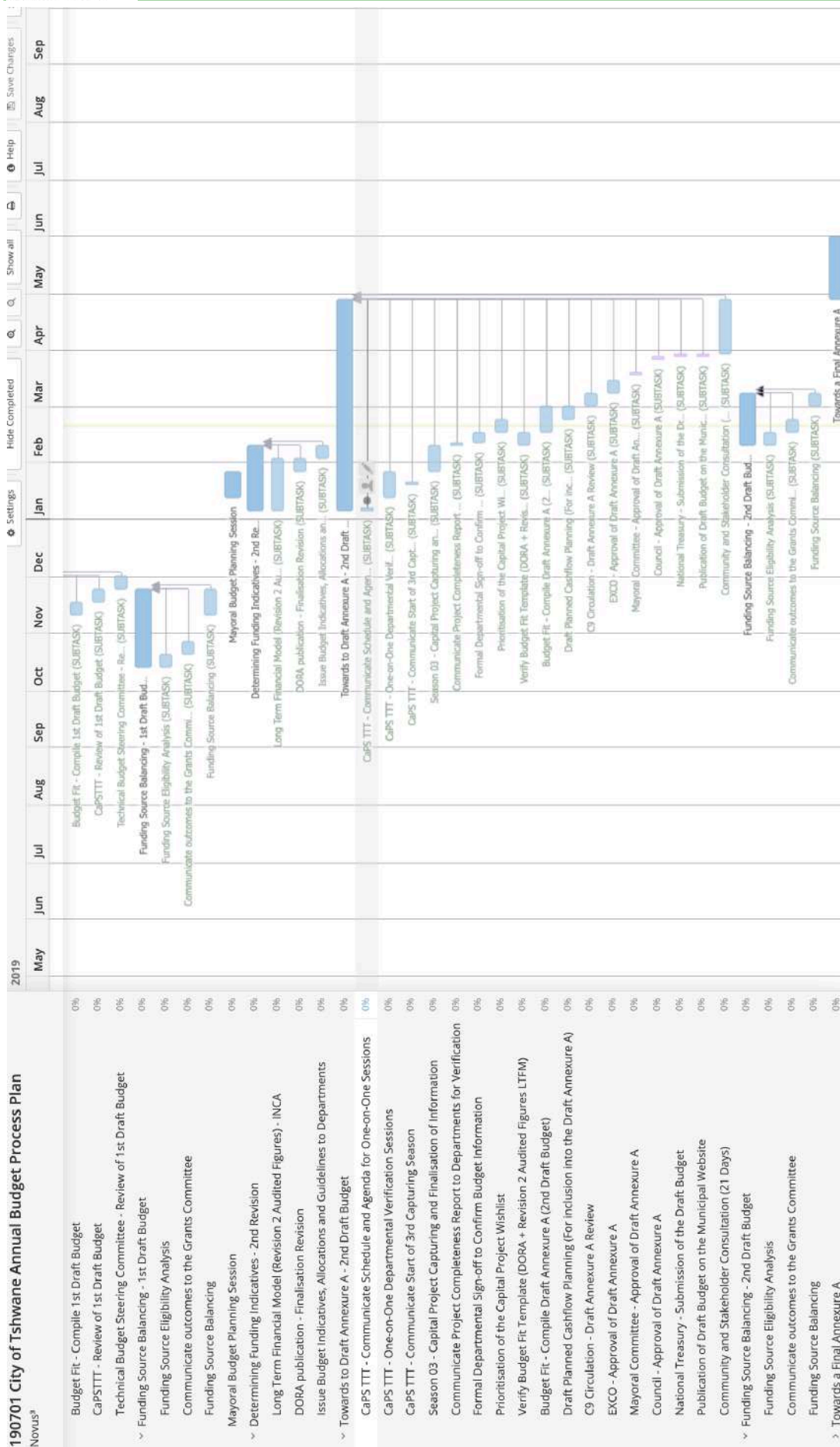


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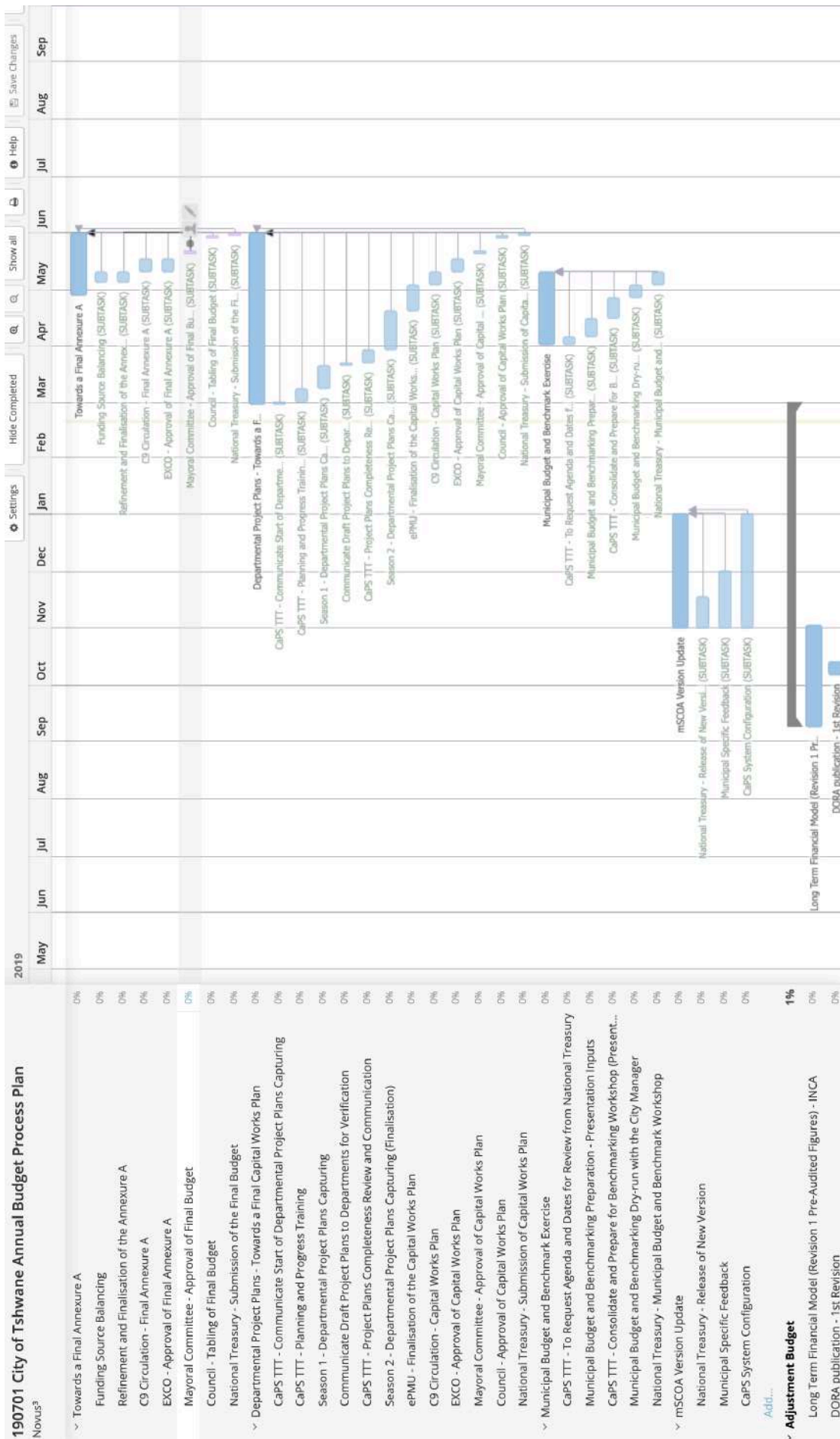


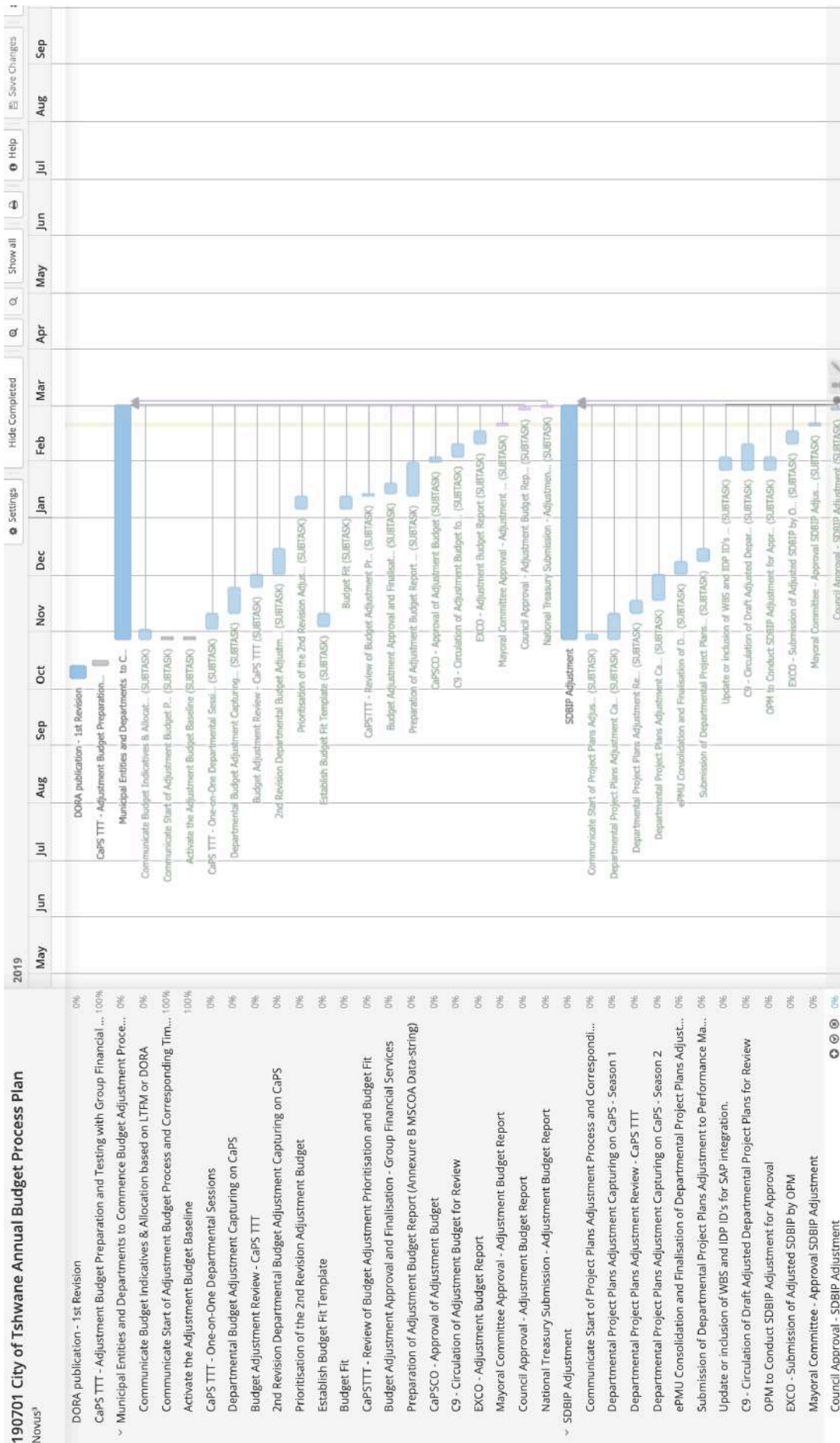


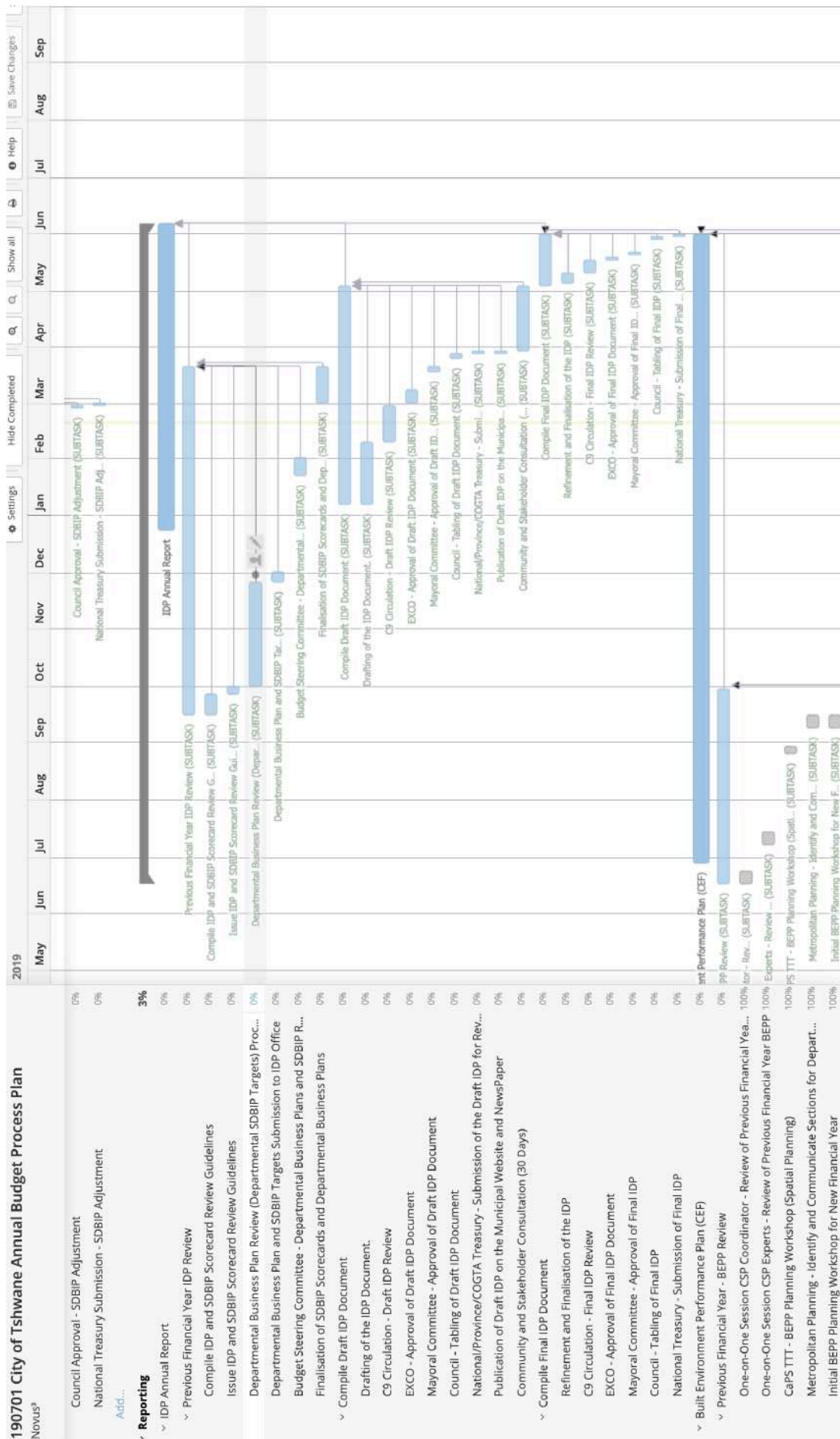




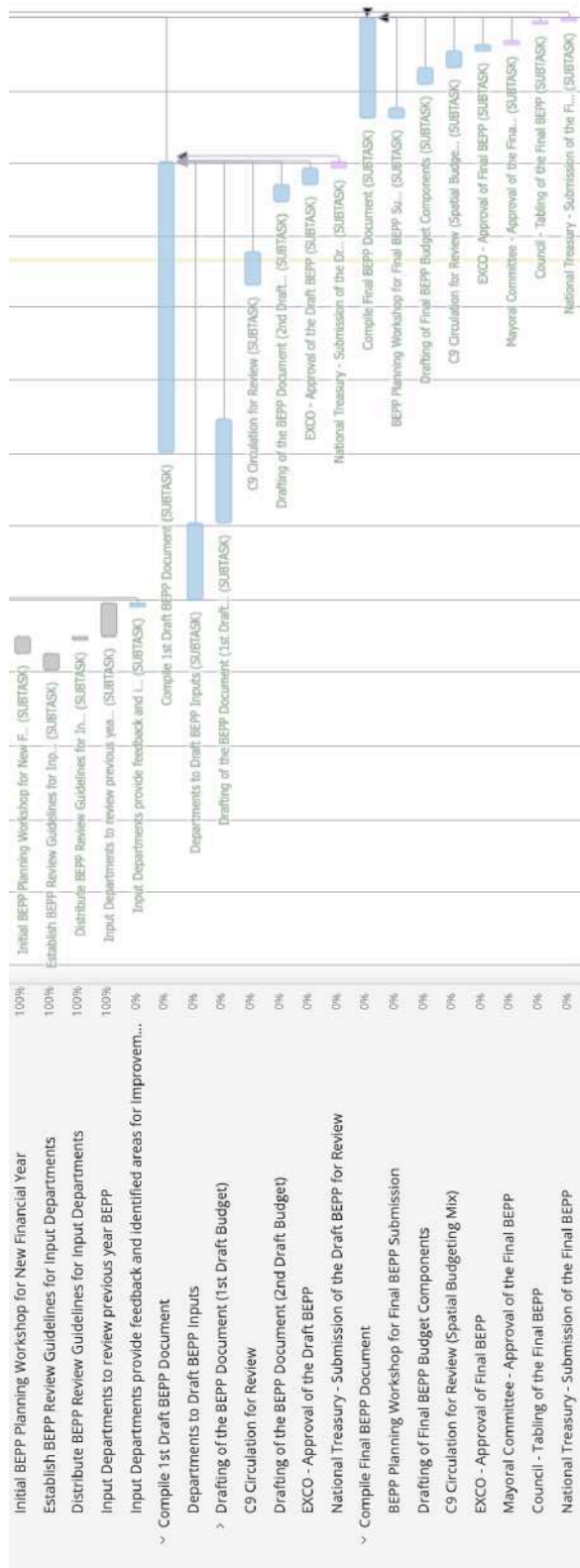
















Addendums

# Addendum 1: Diagnostic Assessment (Section A)

Addendum 1: Diagnostic Assessment (Section A)

# Addendum 2: CaPS TTT and BEPPSCO Evidence (Section A)

Addendum 2: CaPS TTT and BEPPSCO Evidence (Section A)

# Addendum 3: Climate Resilience and Responsiveness Greenhouse Gas Emissions (Section B)

Addendum 3: Climate Resilience and Responsiveness Greenhouse Gas Emissions (Section B)



# Addendum 4: 2019/20 Institutional Arrangements – Climate Mainstreaming (Section B)

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# Addendum 5: CaPS TTT and BEPPSCO Guidance (Section B)

Addendum 5: CaPS TTT and BEPPSCO Guidance (Section B)

# Addendum 6: Project Preparation (Section C)

Addendum 6: Project Preparation (Section C)

# Addendum 7: Capital Prioritisation Model Report (Section C)

Addendum 7: Capital Prioritisation Model Report (Section C)

# Addendum 8: Inter-governmental Planning Engagements (Section C)

Addendum 8: Inter-governmental Planning Engagements (C)

# Addendum 9: CaPS TTT Guidance (Section D)

Addendum 9: CaPS TTT Guidance (Section D)



# Addendum 10: 2019/20 BEPP Review Guidelines (Section H)

Addendum 10: 2019/20 BEPP Review Guidelines (Section H)